

Aviation News

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DECEMBER 13, 1943



Nation Pays Him Tribute: *On the 40th anniversary of the historic flight at Kitty Hawk, Orville Wright is working on a new aviation invention. This exclusive photograph was taken recently at his home in Dayton. Only at President Roosevelt's insistence did he consent to make one of his rare public appearances at a Washington dinner this week in his honor.*

Plane Deliveries Reach 97 Percent of Schedule

Industry turns out 8,789 aircraft in November, despite changes in design and constantly expanding requirements.....Page 16

CAB Grants Feeder Line Certificate

Essair gets approval for Houston-Amarillo route; Continental gets O.K. on Hobbs, N.M.-San Antonio line.....Page 34

Use of Canadian Ports on Alaska Route Urged

Senate subcommittee points to large U.S. investment in recommending negotiations with Dominion.....Page 44

NATA Speakers Assail Federal Red Tape

Convention delegates say too much regulation, grounding private flyers, will be fatal to lightplane industry.....Page 7

Taxes Offset Gain in Airline Earnings

Year's income to be lower as result of sharp rise in operating costs and excess profits levies.....Page 27

Decline in Aircraft Employment Reversed

Total up 3,900 in October after protracted drop in plane plant jobs, War Manpower Commission reports.....Page 12

Washington Observer



U. S. Army Air Force Progress over Berlin. Well ahead plan, Mustangs, Germany - Inc. Photo

TARGET DESTROYED

This photograph is just one of the many excellent pictures that are bringing back overwhelming proof that our bombers are getting through and destroying enemy targets one by one.

As you read story after story about U. S. Army Air Forces bombing missions and see accompanying pictures that back up these stories with indisputable evidence, you are apt to wonder how such remarkable photographs are obtained.

Some years ago the Aerial Surveys Division of Robinson Aviation, Inc., while engaged in aerial photography for the United States Government, encountered difficulty in obtaining crystal-clear photographs that met rigid requirements of sharpness. Investigation indicated that to solve the problem, engine and propeller vibration should be more effectively absorbed.

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Today Robinson camera mounts are standard equipment on the airplanes of both the U. S. Navy and the Army Air Force, and Robinson-designed shock mounts are in production to carry Naval aircraft radio equipment and aircraft instrument panels.

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PRODUCTION TEMPO—A good omen this year of more than 85,000 planes, forecast here months ago, once realization came it is only necessary that December production keep pace with November's 8,769 units, because of the additional working days this month. Thus, the aircraft industry, two years after Pearl Harbor, is producing at an annual rate of about 200,000 planes, with peak expected shortly before mid-1945.

WEST COAST COMEBACK—Not the least of the factors which has pulled production off its disappointing plateau of last summer has been the comeback of the Pacific Coast companies, nearly all of which are now meeting or exceeding their monthly quotas. For example, seven major West Coast companies, operating ten plants, produced 2,541 military aircraft in November against 2,406 in October.

CAUTIOUS ANNOUNCEMENT—Bomber production figures were actually close to 1,500, according to government officials, but OWI announced the 1,666 figure in anticipation of a below level in December which may result in a drop-off in production.

WHAT'S AHEAD IN '46—Big jobs lie ahead since the war production peak is at least 30 percent bigger than that in 1943. There is little doubt, however, that in the general production picture reconstruction will play some part in next year's program. It appears that whatever such plans may be developed, their execution will have to be carried out by an organization similar to WPR, composed of men from industry.

HEAD MAN—It is generally assumed in Washington that over the President's disposal of matters concerning his history-making conference, one of the first domestic problems he will tackle will be conversion, and possibly even appointment of a man to head the program. Optimism over the war's outcome is increasing despite the repeated admonition of leaders that the war is still to be won.

JUSTICE DEPT. AT WORK—Justice Department officials are working behind the scenes to aid in framing legislation in connection with re-conversion to head off possible fractures of anti-trust laws and the control of an industry by one firm or group of firms. Much of the De-

partment's work will become apparent in various Congressional committee reports.

NAVAL TRANSPORT STUDY—After official release of the OWI report on the U. S. airlines' contract operations for the Army Air Transport Command, the House Davis organization plans a similar report on the world-wide Naval Air Transport Service. The Navy has pledged full cooperation. OWI has completed the ATC study and last week avoided final clearance in one or two War Department offices.

MORE TESTS FOR THE MARS—Although the Navy has taken delivery of the giant flying boat Mars from the Glenn L. Martin Co., the Naval Air Transport Service, which will fly the ship, plans further tests. It is still anticipated that additional craft of the type will be ordered soon. Present plans call for regular trans-oceanic flights for the Mars in the near future.

DECISIVE BOMBINGS NEARBY—Col. Edgar S. Gourell, president of the Air Transport Association, who recently returned from Europe, be-



Flash Fireworks Over Algiers

lieves bombing of Germany in the next 45 days or so will be decisive in the war. He declined to amplify his statement, but it is known that

Gets them in there quicker . . . Burns any type of gasoline, from truck fuel to highest octane . . . Fuel supply self-contained . . . Compact, simple and dependable . . . Can be operated anywhere within reach of 110 volt extension . . . Easily handled by one man . . . Can be hooked up or stowed away in a few seconds . . . Delivers 25,000 Btu per hr. . . Unit shown above specially designed for light planes. Other simple duct connections available for larger cows or for radial installations. Comes with complete set of ducts and harness for either type of installation. * Investigate this simple preheater before cold starting time losses interfere with your control operations.

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December 19, 1947

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DRYDEN ON ROCKET PLANES. Although he got no credit, *Zero One* refurbished smoothly by "Demosco Commers," was responsible for an aviation story which was picked up and used extensively last week by Associated Press news items. Frank W. Crenner, veteran writer, now on the Bureau of Aeronautics, was the author. But of sudden questions to Dr. H. L. Dryden, chief of the Bureau of Standards' Division of Mechanics and Sound. The AF writer in considering his story had Dr. Dryden publicizing an attempt to "portent" an aircraft without tail or propeller that can stream through the air like a rocket, and succeeding in the "not too distant future." The Navy protested to Congress officials until told that Dr. Dryden had been given no official separate project, but was just an offshoot.

FLYING WING—The Standard already knows expert and that a successful jet propellant power plant would have "many distinct advantages," especially since propellers cause difficulties above 400 or 500 miles an hour, but despite much concerning a propellerless plane is not likely soon. He and "one of the best scientists in the world" are working on the problem in the form of a flying wing, "the most all 'adequately supported financially and otherwise,' are on the project. "How to distribute to best advantage as the wings the weight carried in the body of the conventional plane is one of the big difficulties," he said, adding that the problems are not insuperable. Superplanes carrying supersonic passengers will depend on "aerodynamic improvements, efficient drive and terminal facilities."

NO LIMIT TO SIZE—Reinforcing statements by Glenn Martin and others, Dr. Dryden sees no physical limit to aircraft. "It is largely a matter of using water material of the right kind in the right places, making every vital part proportionately larger and stronger." "It took a long time for marine architects and engineers to get around to designing and building huge luxury ocean liners like the "Queen Mary." . . . The super-airplane . . . to operate at a pull . . . need only expend loads. Such loads would not be available over all routes," Dr. Dryden believes.

LANDING-CRAFT PRIORITY—A story published in Washington that landing craft had been

gives top priority, even above aircraft, caused some concern in the aviation industry, but the fact is that priority ratings remain unchanged and although temporarily the makers of landing craft are given an overriding directive, it can be recalled at any time and it does not mean that the position of aircraft has been changed to any great extent.

BUD's PURSUECITY—The latest source of publicity as the Budd stainless steel twin-engine transport, which has been test-flying for some weeks, brought more farm-to-town to the company's aircraft officials who have sought religiously to keep the project out of the headlines. The "New York Herald Tribune" came up with the first exclusive, but Budd's spokesmen officially forbade any New York staff. Next day the Navy's public relations officer issued a formal announcement. The Budd Co. hopes to issue its own behind story, perhaps with pictures, sometime in January. With promise of the severe shakedown shoring there is considerable speculation in aircraft circles as to whether the stainless steel aircraft program will be continued, and to what extent that had been previously rumored.

"WILDCATS" OVER EUROPE—Rear Admiral D. C. Ramsey, chief of the Bureau of Aeronautics, dropped a just while on a tour of the Grumman plant the other day that Navy aircraft may be used in the future to strike at Germany as well as at Japan. The Admiral, terming the Grumman Wildcat as one of the best in the world, said that "we consider the Grumman plane will play a successful part in the prosecution of the war against the entire Axis."

PEACE PLANNING—Despite warnings of government and military leaders that there are uncertain hard days ahead before the war is won, the nation nevertheless is turning its thoughts more and more to practical problems connected with reconstruction in peacetime production. The aircraft industry, the forefront of production of weapons which probably can hasten peace now, actually is making plans for reconstruction, but at the same time probably is aimed on the effort to prevent a lull in the war effort.

HUGHES' ARMY ORDER—Washington officials verify reports that the AAF has placed an order with Howard Hughes for his Dornier D-2, but it was handled at Wright Field instead of Washington.

A war can last
one minute too long...



A man can get killed just as dead on the last day, the last hour, the last minute of the war as he can at any other time.

If American troops are delayed in their advance because we at home fail to produce the supplies they need on time, then we are guilty of prolonging the war, lengthening the casualty lists.

The great majority of American industrial workers, owners and managers realize this grim fact. They are working night and day to win the war and win it as quickly as possible. They do not want this war to last "a minute too long" for

a son, brother, husband, sweetheart or friend.

The point for all of us to remember is this: Even when the newspapers tell us of new Allied victories on the fighting fronts we must not slacken our pace at the home front. We must do all in our power to shorten the war, to save lives.

ETHYL CORPORATION Chester Building, New York City

Our war job is manufacturing Ethyl fluid for improving the antiknock quality of fighting gasoline—and delivering it on time. Ethyl workers have been awarded the Army-Navy "E" for "Outstanding achievement in producing war equipment."



Aviation News

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DECEMBER 15, 1943

NATA Asks Easing of Air Laws, Plan on War Surplus, Feeder Lines

Excessive red tape, grounding private flyers, assailed as important deterrent to development of lightplane industry at St. Louis meeting.

By ALEXANDER McSURELY

Strong criticism of what was characterized as excessive Federal government restrictions hampering the future development of aviation, demands for a special federal commission to handle distribution of surplus war goods in orderly fashion, and plans for participation by food store operators in a network of feeder airlines were the most significant developments of a double-billed four-day St. Louis convention of the National Aviation Training Association (which changed its name to the National Aviation Trades Association) and the Aviation Distributors and Manufacturers Association.

Speech after speech in the four-day meeting lambasted the surplus red tape entangling private flyers, called for simplification of regulations, while talks of the rotating NATA president, Leslie Bowman, of Ft. Worth, and the incoming NATA president, Ransom Turner, of Indianapolis, at the closing business session re-emphasized these points.

Urges Collective Action—Ransom Turner, "Have you tired of being kicked around and being told how to run your business? Up to now you have been individuals, but today we have reached the point where the individual doesn't make much of a mark. It is 'Whom do you represent and how many? Collectively we can make a lot of things happen.'"

Bowman outlined an enlarged program for NATA under its new name, to serve every type of unscheduled and independent commercial aeronautical activity, called for elimination of wartime restrictions on civilian flying as soon as possible, and a thorough revision of Civil Air Regulations in the simplest form possible, consistent with safety.

Recommendations—Resolutions adopted at the closing session asked

for continuation of the Civil Pilot Training Act of 1939, due to expire next June 30; commended the Army for recognition in a newly published field manual of the principle that "Land power and air power are co-equal and interdependent forces, neither is an auxiliary of the other"; and called for appointment of a special federal body to dispose of surplus war goods. The association also expressed itself as "not in favor of H.R. 2429 (the Lan Bill) as now written" and asked for a hearing by NATA representatives before the bill or any similar measure

is enacted, called for additional development of many small airports and landing strips by federal and state agencies to accommodate the rapidly expanding group of private flyers in the postwar era and asked for simplification of government military and peacetime restrictions on civilian flying.

Civil Aeronautics Act Revision—It asked that principle of sovereign authority by the federal government over the air space, and prevention of monopoly in air transportation be made a part of legislative revision of the Civil Aeronautics Act of 1938; opposed entry by unincorporated operators of surface transportation companies into any division of the air transportation business; asked CAB to set now on preliminary steps necessary to grant certification on new routes, particularly feeder lines, in order to provide jobs for demobilized U. S. Air Force veterans, and to provide for delivery of all first-class mail by air.

It demanded that the War Depart-



New Officers and New Name: National Aviation Training Association, at its recent St. Louis meeting, changed its name to the National Aviation Trades Association and elected the officers shown above, from left to right: Ransom Turner, Chicago, Ill., president; Leslie Bowman, Indianapolis, Ind., second vice-president; and F. Leslie Morrison, Buffalo, N. Y., first vice-president.

ment and WPB "as soon as victory appears safe" permit aircraft factories to build feeder planes, and other commercial-type planes and permit short-haul operators to begin operating on many test flights.

Student Training Program—Revival of the Civilian Pilot Training Program for high school classes was urged as was immediate CAB action revising CAR No. 24, the permit returning veterans who have had mechanical or technical training to take examinations under the new system, and also to establish a new airplane and engine certification system for CAA-approved schools before the veterans' administration begins its large-scale training program for reservists.

The coalition opposing the Lea Bill in its present form was not discussed, although previously Bowman had issued a statement approving the general nature of the bill, and opposing state control of aviation.

Favors Federal Law—"I would rather by far take the chances of getting necessary changes made in one law than 100," he said in trying to get changes made in various state laws," Bowman said. "Courts have held that radio waves cannot be stopped at a state boundary and people who are against federal control should remember that airplanes are in the same category."

Robert H. Hinkley, former Assistant Secretary of Commerce and former Civil Aeronautics Authority chairman, made simplification of flying regulations a main point of his talk on "A Post-Peak Program for a Three-Seasonal Winter." He warned NATA members, however, that "the future will be what you make it. You can't be free from government control if you won't demand and take responsibility yourselves."

Cites End Tag Laws—"In the past, unwise regulations have had the effect of blocking private flying," he said. "I, personally, know of cases where people have sold their personal planes and let their licenses lapse solely because of the nuisance of complying with the regulations."

Now assistant to the president of Sperry Gyroscope Co., Inc., Hinkley named as his other three main points for further development of the Air Age: use, since aviation education and training through elementary schools, high schools and colleges, with flight operators providing laboratory training; a comprehensive school training; two, improved and additional landing areas and navigation aids including landing



NATA Spokesman Robert H. Hinkley, former CAA chairman, now assistant to the president of Sperry Corp., who told NATA members they could not be free from government control unless they demanded it and assumed responsibility, pointing out that aviation regulations in the past have had the effect of blocking private flying.

areas in the great recreational areas, such as national and state parks, and three, landing strips along highways.

Executive Reprehended—Laurie Neville, editor of *Aerospace*, told members of ADAMA, "Personal plane flying has suffered for years from too much law. The original rationale of the Civil Aeronautics Act was to regulate and promote civilian aviation. There has been infinitely more regulation than promotion."

Warning of the dangers of slowing technical progress in aviation, he pointed out that many lightplane manufacturers in the pre-war period were so absorbed in getting

light engine manufacturers to provide increased horsepower that they ignored several new revolutionary developments that would have given them the desired performance without increasing the power. "This cannot continue in the postwar period," he added.

Air Cargo Discussed—Warren H. Albertson, of Stockton, Calif., national commander of the American Legion, pointed out that the airplane's principal usefulness after the war would be in handling high percentage value cargoes, and in personal transportation. "It will not take any steamship away from the railroad or steamship. It will create more," he added.

Representative Jennett Randolph, of West Virginia, cited the need of better transportation from airports to downtown areas, and discussed the need for developed satellite airports both from coal and oil shale to supplement the nation's oil supplies.

Asks Uniform Laws—Wayne W. Parrish of American Aviation, drew a parallel between present regulations affecting the private flyer and a need for similar regulations protecting the safety of the automobile driver.

"For example," said Parrish, "just the other day I saw a man who had never driven anything but a Ford coupe step into a Plymouth sedan and drive away without being checked out."

He used uniform, simplified federal traffic laws, enforced by state and local agencies.

Research—Frank Tschene of Aero Digest told NATA at a luncheon that the postwar aviation picture, to be successful, must depend on research and technical knowledge, rather than on politics. He called for establishment of a Secretary of Air Commerce in the President's cabinet, and establishment of a clearly defined statutory code to take the place of hodgepodge direction and regulations.

Tschene, who is also chairman of the aeronautics advisory committee of the Department of Commerce, suggested that in the field of international flying, selected airports should be designated by air nations to be used by citizens of favored nations on terms of fair use and rentals and regulation of traffic control on the basis of air reciprocity.

CAP Program—Lt. Col. Eric L. Johnson, assistant CAP commander, discussed a contemplated program of recruiting CAP cadets, and urged simplified federal regulations for flyers.

"Aviation must be a hometown

Wins NATA Award

The annual NATA award for outstanding contributions to aviation was made to Capt. Ralph Richmanberger and announced at the association banquet. Capt. Richmanberger was unable to be present.

business. You can't be independent and do your own thinking on a Saturday. And regulations must be simplified until the airplane is considered in terms comparable to the automobile."

Col. Johnson said CAP had enrolled 52,000 members and 43,000 additional cadets, making it the U. S.'s largest civilian aviation body.

Feeder Line Operations—Discussing feeder line operations by fixed base operators, W. Wiley Reed, Kansas City, outlined the program of Consolidated Air Lines, Inc., an organization of fixed base operators headed by Ransom Turner, Indianapolis, which has filed applications for a system of feeder routes across the nation. Operators have available finances and are "ready to start tomorrow if applications are approved," he said.

Later he said 18 operators are operating in the organization, and that they expect to use twin-engine eight-passenger Beechcrafts, which can carry 800 pounds of cargo in addition to passengers. The planes will be equipped for pickup, storage, and routing will average about 40 miles between stops, maintaining a "block-to-block" speed of 120 mph.

Higgins to Remain In Air Industry

Best converter reveals plans for biplane and huge cargo plane.

By MARY PAULINE PERRY

Andrew Jackson Higgins, New Orleans boat-builder extraordinaire and a newcomer to the aviation industry, has definite plans to stay in the aircraft industry after the war with his plans based on two specific projects now taking shape.

Higgins may be the only idea of operating the automobile manufacturing field as some other aircraft men have indicated they may do, on the grounds there are plenty of experts in that line, but Higgins believes he has a considerable understanding of the automobile industry and his sufficient room for expansion to support newcomers.

Boat Plane—His postwar plans

are being built around a rotor plane designed by Ross Bond and a large cargo plane on which Gintagge M. Bellanca is now working. The large cargo plane, Higgins said, is too far in the future for comment, but the helicopter is "within our scope of development right now—in the immediate present."

Higgins looks to the construction of the helicopter commercially in uses varying from two-place to 14-passenger airplanes. He says they will have a comparatively low rear-

rest price, and added that based on 1939 standards for materials and wages and on a volume of sale justifying economies of mass production, the two-passenger ships would sell for about \$5,000.

Simplified Operation—He expressed enthusiasm over the simplicity of operation, and said Bond has developed safety devices to forestall accidents. To date, no attempt has been made to develop folding rotor blades.

Higgins said he felt it was a mis-



Higgins Helicopter: This rotor plane was designed by Ross Bond for Higgins Aircraft and is now ready for test flights. Andrew Jackson Higgins, New Orleans boat and plane builder, told AVIATION NEWS this plane will be built commercially after the war in mass quantities from two-place jobs to 14-passenger airplanes. The existing drawing of the larger model has been prepared by Higgins engineers.



take to advocate use of any particular material in airplane construction and that plans should be made of composite materials used where best suited to a point of structure or in placement. His postwar plans include use of as many varied materials as can be built into an airplane.

Privately Developed—In this connection, he said the Bellanca cargo plane design is not radical and that the plane would be built of composite type of materials.

The Bessie rotor and the cargo plane are both Higgins developments, and without government sponsorship.

Higgins plans are now devoted to production of Carlin C-85 Comanche. In addition to Dean and Bellanca, Higgins' aircraft staff has as an officer Col. John H. Jourd, who organized the Chinese air force and was formerly president of the Aeronautical Chamber of Commerce.

Wright Favors Free Competition On Postwar Foreign Air Routes

Needles of aviation world pay tribute this week to co-inventor of airplane at dinner in Washington on 44th anniversary of Kitty Hawk flight.

By ALEXANDER MCKURLEY

The co-inventor of the airplane and the first man to fly it believes that international air routes in the postwar period should not be limited to any one company or to any one country.

Orville Wright, 72-year-old scientist, who will receive tributes of the aviation world, Dec. 17, at Washington, on the 44th anniversary of the first motor-powered airplane flights at Kitty Hawk, N. C., in 1903, voiced his opinion in an interview at his included laboratory in Dayton, Ohio, shortly before leaving for Washington to attend a dinner given in his honor.

Anniversary Dinner—"Aviation in Peace" will be the theme of the anniversary dinner, which will be attended by many of the nation's aviation leaders. James Jones, Secretary of Commerce, will preside.

Wright foresees a serious crisis in the aviation industry in the postwar period, permitting the "dark age" of American aviation following World War I, unless intelligent and cooperative handling by government and industry are gone to meet it.

World Trade Factor—"International air commerce will play an important role undoubtedly in future development of aviation," the white-haired inventor said, "but I do not think any one company or any one country should have a monopoly. Government subsidy paid for a large part of the expansion of our international air routes, before the war, and certainly the operations now going on would not be possible except for government financing. It

does not seem fair that the companies, who have had the advantage of this government financing, should claim a right to monopolize the world's air routes because of it."

Oppose Outright Competition—On the other hand, Mr. Wright does not favor a wide-open outright competition between all airlines. "If all our airlines which have acquired their licenses of operating foreign routes, do so, however, there won't be any business for anybody," he continued. "There must be some reasonable arrangement worked out."

Advancements in science may make some aviation procedures obsolete, he predicted, referring particularly to recent proposals for aircraft and to development of some more efficient method of landing and launching airplanes than the present

bulky, heavy landing gear. He believes the helicopter will have great value in short trips, although he does not consider it as likely to approach the conventional airplane in efficiency for longer hauls.

Private Flying—He is conservative on the development of private flying after the war, while admitting its great potentialities for widening the sphere of aviation.

The inventor lit a cigarette and blew a bit of smoke-rings.

Mr. Wright watched it rolling through the air and growled:

"Do you know the scientific principle involved in making that ring?" he asked. "The rolling motion that your tongue gives to it creates a centrifugal force that holds the smoke together."

Smoke Trench—From this tangent he turned a discussion of smoke tunnels and their use in testing aircraft structures by making visible the airflow over a wing or other airfoil. A representative of the Grinnell smoke tunnel in Connecticut recently visited him in Dayton to consult about some early smoke tunnel experiments in his laboratory here in 1919.

"We used a very small smoke tunnel, and used the blower from our regular wind tunnel. At one time we tried tobacco smoke provided by a man who sat there smoking and puffing it out, but it wasn't very successful. Later, we tried a mixture of chemicals to provide the smoke and it worked better. If conditions are right, the smoke shows little eddies and vortices in the air currents over an airfoil which offer a key to many of our design problems."

Kitty Hawk Flight—Naturally the conversation turned back to the Kitty Hawk flight, and the years of practical testing and experiments which preceded it. Orville Wright receives all tributes in the name of the famous



Biggest AAF Motorless Aircraft Tested: Shown in the approval of the test pilot during a recent test at Wold-Chamberlain Field, Minneapolis. Details are restricted, but the photograph indicates its size.

Northwestern Aeronautical Corp., the giant craft uses the approval of the test pilot during a recent test at Wold-Chamberlain Field, Minneapolis. Details are restricted, but the photograph indicates its size.



Wright Brothers team, rather than accepting individual credit for his own work. He credits that remarkable cooperative association between his brother Wilbur, who died of typhoid fever in 1913, and himself, as the most important single factor in their discovery of the principles which made power airplane flight possible.

Still Rager Aeronautics Student—Four decades after that wintry day when he crashed on the lower wing of the biplane and launched into space at Kitty Hawk, his hair is thinner and whiter, he is a little slower, but he is still an excellent physical condition, and his gray-blue eyes sparkle as he discusses aeronautics theories or research in which he is presently engaged.

As Orville Wright goes to Washington for the anniversary observation, the original Kitty Hawk plane still remains in England, where it was sent in 1925 as the result of the long-standing controversy between the Smithsonian Institution and the Wrights.

A year ago, however, Dr. Charles G. Abbott, secretary of the Institution, published a statement giving full credit to the Wrights.

May Bring Plane to U. S.—Mr.

Wright indicated recently that he was considering bringing the plane back, but that he would take no action while the war continued because of possible hazard to the historic aircraft during its passage back to this country.

PAA Lists Commercial Hops Over Atlantic

Reports 5,200,000 miles of non-military flights since Pearl Harbor.

Pan American Airways, as a sequel by its Atlantic Division to the recent report marking its 8,000th transoceanic crossing since Pearl Harbor, has disclosed some figures on non-military operations.

In the two years ended Dec. 7, PAA Clippers crossed the Atlantic 1,200 times, flying more than 5,200,000 miles. On them were 26,796 high-priority passengers and 6,100,000 pounds of air cargoes, the largest single piece weighing 7,700 pounds. United States and foreign mail that passed through the marine terminal at La Guardia Field, New York City, was 1,494,680 pounds.

Notable Passengers—Among notables other than President Roose-

velt who have used the Clippers are Queen Wilhelmina, King George of Greece, Crown Prince Eli, Secretary Macmillan, Donald Molloy, Wendell Willkie, Harry Hopkins, W. Averell Harriman, and others.

As an outstanding war segment PAA also the crossing of the world of a Clippers flight commanded by Capt. William M. Maudslayi, assistant chief pilot of the Atlantic Division, and 95 other flights completed in the interest of the government without curtailment of regular operations.

333,265,000 Miles Flown—In a separate announcement, PAA said Clippers have logged more than 333,265,000 miles in 16 years. In the three months ended Sept. 30, they flew 16,247,086 passenger miles and 16,911,721 plane miles. These compare with 142,366,488 passenger miles and 16,232,338 plane miles in the second quarter of 1943, and 97,168,763 passenger miles and 8,498,368 plane miles in third 1942 period.

Schulgen Assigned

Brig. Gen. George F. Schulgen has been assigned as chief of staff of the First Air Force at Mitchell Field, N. Y., to succeed Brig. Gen. R. E. Nugent, management unannounced.



Coolest Biggest Glider Test: Witnessing a test flight of the AAF's largest production model glider were, left to right, John E. Parker, president, Northwestern Aeronautical Corp., builders of the craft; R. W. Whittington, Northwestern's production manager; James Lonsont, chief inspector, Capt. Ben West, Wright Field, co-pilot and Lt. Col. Bruce B. Price, pilot, in charge of glider projects at Wright Field.

Decline in Aircraft Employment Arrested, Gains Reported by WMC

Total up nearly 3,900 in month, summary of week's activities in other federal bureaus and war agencies.

The decline of aircraft employment, which last summer threatened production and was an important factor in the launching of the West Coast labor plan, has been reversed.

Number of workers in the industry generally rose nearly 3,900 from Oct. 1 to Nov. 1, with other increases indicated in December, according to War Manpower Commission officials, who explain that this is due in part to the setting of employment ceilings and a decline in shipbuilding employment. Operations of the West Coast program are reported to have moved 87,000 workers required for West Coast shipyards after a review of employment needs in March. The program was not major revision in volume of shipyard activity as a result.

Situation Rates of Two Plants: One of the most critical aircraft plants, the Lockheed Aircraft Corp., reported an easing of their situation with some referrals reduced because of inability to absorb workers as fast as they were referred.

Boeing officials said the gain in workers was gratifying but stressed the fact that there still is a continuing need for new employees to meet normal replacements in Seattle and to meet recently increased requirements for the nearby Renton plant.

Women's Labor Reserve: In connection with the manpower situation, the Women's Advisory Committee of the War Manpower Commission has said that the shortage in the part of many male workers and employers that women form a labor reserve to be called up temporarily in having its representatives as war workers.

Belief of many women that they are a reserve group for war employment only is held by the committee to be a contributing factor to underutilization, absenteeism and turnover of women in the wartime labor market.

National War Labor Board last week appointed to the Airframe Panel Charles Hook, Jr., assistant to the president of Boeing Iron & Steel Corp., Baltimore, who will represent industry. Hook has sat on various WLB tripartite dispute panels as industry member for the past year.

The Airframe Panel was set up by

WNLB, late in September, to consider and make recommendations in all disputes in the aircraft industry, involving wage or salary agreements. The Panel held a preliminary meeting in New York last month and several hearings are scheduled during the next month.

Membership: Other members previously announced are Thomas L. Morison, professor of economics at the University of Buffalo, chairman and public member, Garry Condon, Grand Lodge representative of the International Association of Machinists, AFL, and Ed Hall, international representative of UAW-CIO, labor members John Mead, labor relations representative of Bell Aircraft Corp., was chosen alternate industry member.

The Board also upheld a demand of the Detroit regional WLB denying pay to employees of the Nash-Kelvinator Propeller Division, Lan-



TESTS SEXTANTS:

A look into the infinity of a miniature solar system is simulated in this "collimator" specially designed by Bendix Aviation engineers to assure the accuracy of aircraft sextants, basic instruments for celestial navigation. Each of the radially mounted tubes contains an illuminated star-like reticle to permit accurate calibration of each sextant by observing precise stars on the simulated star map angles ranging from zero to 88 degrees from the horizon.

ing. Mich., during a two-day work stoppage. UAW-CIO opposed the decision of the regional board, arguing that the company had violated the no-strike no-lockout pledge. NWLB refused to review the case on its merits and said the union had failed to establish any grounds on which the regional board's decision might be reversed.

Wayne L. Muraw, writing the majority opinion, and the regional board found no evidence of a lockout in the sense that the purpose of a two-day shutdown was to force on the workmen an agreement with terms satisfactory to the company. The case had developed out of an incident concerning two foremen in the blade department, against whom employees had complained because of their failure to adjust grievances. Board members dissented in the NWLB decision.

President's Committee on Fair Employment Practices announced that North American Aviation Co., Dallas, has revised its employment policy affecting Mexican aliens. Since October, when the Committee first took up the situation with the company management, more than 50 Mexicans have been hired. FEPC has received assurance from the Plant Security Division of the Air Corps in the Texas area, that applications by aliens for employment will be cleared without delay. There are no legal restrictions on employment of aliens in war industries, or certain security measures are met.

ODT—Office of Defense Transportation has issued a bulletin entitled "Transportation Training" designed to tell officials about training programs that have helped with manpower problems. Included in the bulletin, the first of a series, is the training program developed by American Export Airlines.

PAF—Construction of aviation engine plants and special refueling units can be speeded up by obtaining new material that has been declared "excess and available for war plants" according to an announcement by Ralph K. Davies, Deputy Director, War Relocation Authority. There are numerous excess stock piles throughout the country, according to Davies, two of the largest in Houston and Los Angeles. Production of aviation desired items have been reduced so that as operators can obtain supplies in less than 24 hours, if necessary. Specific information on location of stock piles of these materials, which at present are available only to re-

frigerating building aviation gasoline plants, may be obtained from the Redistribution Section, Construction Division, Petroleum Administration for War, Washington 25, D. C.

Defense Plant Corp. increased its contract with Continental Aviation & Engineering Corp., Detroit, in the amount of \$49,950,000. This will provide for additional plant facilities in Muskegon Co., Mich., and brings the overall commitment to approximately \$25,000,000. Contract with Ford Motor Co. was increased by DPC by about \$128,000 for additional plant facilities. DPC's previous commitment to Ford was \$393,000.

Construction amounting to almost \$1,000,000 was authorized by the War Department at two airports in Texas and one in Georgia. For buildings at Chatham Field, Savannah, and for special bombardment training facilities, \$500,000 was authorized. Extension of runways and other construction at Hurlbly Field, Grand Prairie and at Laguna Madre Sub-Post of Hurlbly Army Airfield, Texas, will cost \$448,872 and \$592,007, respectively.

Award—Army-Navy production star award went to employees of the Rotopac-Powder Division of Bendix Aviation Corp., Teterboro, N. J., for sustained performance in development and production of vital aircraft pressure equipment. A previous Army-Navy II was awarded this division more than a year ago.

New Weather Room Tests AAF Equipment

Wright Field chamber simulates Arctic blizzards, jungle heat.

A new all-weather chamber at Wright Field can provide anything from an Arctic snow storm to jungle heat and humidity. Developed to test Army Air Force equipment under widely varying conditions, the new test room, in the aero-medical laboratory of the Materiel Command, is one of the most versatile pieces of equipment at the field.

The room is 18 feet high, 12 feet long and 18 feet wide, and is lined with all welded stainless steel, with walls of six inches of steel and six inches of fire-resistant metal sheets as insulation. A wooden floor is removable for certain experiments.

High Sun Lamp Used: Six huge six-lumen, 1,500 watt metal-halide lamps have been operated in combination with a bank of ten smaller ultra-violet ray lights.

The entire chamber can be converted into a pond one foot deep, by



Wright Field's New All-Weather Chamber, can test Army equipment developed for use in any climate. It can reproduce artificially, hail storms, rainstorms, sand storms, sleet, fog, jungle humidity, temperatures as low as 60 below zero and as high as 118 degrees above zero. Above: Two Army medical laboratory soldiers adjust their gas-man life rafts in the chamber to test water emergency equipment. The big lights along the left wall are 1,500-watt sun lamps, which in combination with the smaller ultra-violet ray lamps, produce artificial sunlight. Cold air, to simulate Arctic conditions, comes in through the vents in the wall behind the men.

covering the floor with watertight rubberized cloth, which is hooked to floor and walls, providing a convenient place for testing life rafts and other emergency equipment.

An 18-inch blower provides winds of any desired velocity up to the hurricane found in any habitable area of the world. Another blower, inside the chamber, will produce winds up to 40 mph which can be focused directly on the equipment being tested.

Hot and Cold Rooms: Showers on the walls provide regulated hot or cold mists at will, and these rains can be lashed into a full gale if the blower is turned on. To get the effect of a wind storm, a hopper outside the chamber, connected with the blower, is opened and sand brought back from the Libyan desert is poured into the wind stream.

Humidity can be controlled to any degree through an electrolytic heated humidifier, and through control of the air pressure in the chamber. Fog is produced through spraying a

fine mist from specially made nozzles in the roof of the chamber.

Temperature Control: Two sets of electric coils automatically control the temperature in the chamber, and electric outlets for plugging in various items of electrical equipment such as electrically heated drying racks are provided.

Two individual compressors refrigerate the chamber for simulating Arctic conditions and, when both are turned on, temperatures down to 60 below zero can be quickly attained. Controls are operated from a panel outside the test chamber, and the operator is in constant communication with the men making the tests by interphone.

Plane Glider Group

Interposition papers have been filed in Washington, D. C., for the Glider Institute of the Americas, Inc. which all glider manufacturers will be invited to join.

Budd Stainless Steel Cargo Plane Tested

Hege craft is first built for Navy, designed as an amphib.

Flight tests on the first large-scale airplane of all-welded stainless steel construction, though incomplete, already indicate the intended use of the craft will be realized.

The plane, built under Navy contract by Edward G. Budd Manufacturing Co., of Philadelphia, is a two-engine cargo carrier, similar to the airplane pictured in Aviation News August 2. Except for plywood doors and interior floors, the airplane is built entirely of stainless steel.

Designed for Cargo—Details of construction indicate to cargo handling are unusual in that this will be the first airplane the Navy has obtained which was designed entirely with cargo handling, loading and unloading as its primary mission. Other Navy cargo planes have been adaptations of personnel transports or combat types.

The plane is powered by two Pratt & Whitney engines, but other details, including cargo capacity, range, speed and performance are withheld.

A Army, Navy Share Output—Under terms of the contract, part of the production will be for the Navy and part for the Army. When the craft has been fully tested and accepted, the Navy plans to use it as the fleet of cargo carriers under operation by Navy Air Transport Service.

Budd Manufacturing Co. began preliminary engineering work on the new plane the day after Pearl Harbor and later received a Navy contract. Budd's analysis then resulted in its original stainless steel plane, a three-place amphibian named the Pioneer in 1939. This airplane is now mounted before the Franklin Institute in Philadelphia.

Aircraft Firms Find Veterans Aid Morale

Material benefits of employing ex-servicemen cited in CWA report.

Men having released from the armed forces at the rate of about 70,000 a month because of age or disability not only are helping to relieve the manpower situation but are contributing to their own morale in a way that no new recruits can. Workers in aircraft and other war plants.

In a comprehensive review of the



Budd Pioneer. Edward G. Budd, whose company built the Santa Fe Super Chief shown above, believes there will be passengers enough for both the airlines and the railroads after the war.

aviation, the Office of War Information reports a number of companies, especially airplane companies, have placed standing orders with the Veterans Employment Service for discharged service men.

Naval Director—Hugh A. Kerwin, assistant director of the service, expressed the general viewpoint of the industry when he commented that "nothing so lifts the morale of a discharged veteran as to find that, despite his disabilities, he is still able to hold down a good job. He is particularly pleased that the job he is able to perform contributes to winning the war."

Examples—OWI cited numerous instances of veteran employment by aircraft plants, including Douglas Aircraft, which has done particularly well. For example, a former Marine flight sergeant shot down at Guadalcanal with the loss of an eye is now fabricating radars in the Douglas SBD division. Another, a veteran of five major naval engagements, now suffering from psychoneurosis, is employed in production control where, removed from ship names and given comparatively light work, he is making rapid progress.

Texas Division of North American Aviation reports 680 honorably discharged veterans on its rolls. OWI said the company, working in cooperation with the Veterans Employment Service, the Veterans Administration and American Legion posts, has made a concerted effort in its California, Texas and Kansas City divisions to employ discharged veterans.

Rehabilitation—North American's

efforts to employ as many veterans as possible, the report says, has a three-fold purpose, first, to provide a method of rehabilitation of disabled war veterans, to help them find a place in civilian life, second, the company can utilize the knowledge and technical training many of these men gained in the armed forces, third, placement of veterans in production departments makes for a good morale factor by bringing into the plants the personal experience of combat. Consolidated-Vultee Aircraft is also using many veterans.

Threaten To Cancel Brewster Contract

Kaiser seeks to acquire plant with Boeing group but with doubtful result.

By BLAINE STUBBSFIELD

Majority of the House Naval Affairs subcommittee, which has just heard a month of testimony on the Brewster controversy, is of a mind to withdraw the Congress' consent six months from now, if production is not up to a fair rate.

Henry J. Kaiser, who was elected president last month when Frederick Reibel resigned, is seriously concerned about this threat to his production reputation and is spending about 90 percent of his time in an effort to rehabilitate Brewster.

Tested—The Congress-Committee spokesman said testimony designed to show that several other aircraft producers had worse records than Brewster was unfair, the spokesman said. He said that the last when all factors are considered, they must.

Kaiser, who desires no compensation for his work with Brewster, says the rate of Carrier production can be run up to 281 a month by September, 1944. But the Committee insists that he stick to a more realistic program calling for 88 in December, 106 in January, 156 in February, 146 in March, 144 in April, and 180 in May, which is regarded as peak.

Three Plants—Company has three plants: Long Island City, a three-story building which makes parts, the 40,000-sq-ft assembly plant at Johnstown, near Philadelphia, to which the New York parts are trucked, and the Newark converted-hanger plant, which does not fence

What lack the Committee would have if it tried to close the Brewster-Corpus contract in 1943. James V. Forrestal, (chairman) of the Navy, addressing the Committee, strongly emphasized the need for planes, even though dealing with Brewster was expensive business. He said Brewster had produced the famous "F4U" in the world in 1938 (the Buffalo) and there was nothing to indicate at the time that the company would fail to meet the responsibilities of its heavy expansion to over \$100,000,000 in backlog.

Feasible—One Corvus alone is a formidable weapon, and a dozen of them will outfit an auxiliary carrier, less than a battleship in the equipment of a fleet carrier. There are now about 50 carriers in all, and next year the Navy's deck-based air power may double.

The Committee still doesn't have a clear picture of what happened to Brewster. It blames the Navy for over-patience, and calls it unlikely in peaking two presidents, C. A. Van Dusen and Reibel, who had successful records but couldn't succeed in getting the best out of the "bullet-jacket labor contract" under which the company operates.

The Committee believes both Kaiser and the Navy are putting too much faith in the promise of Don de Lorenzo, union leader, to cooperate. Production by Brewster of SSBs dive-bombers for the Navy, which never used them in combat, and for the British, is terminated with the new year.

Parks Tests Reaction To Simplified Plane

CAB issues special regulation permitting school employes in role on two-control lightplanes.

The Civil Aeronautics Board has facilitated tests by Parks Air College of St. Louis and its affiliated schools on safety and ease of flying simplified two-control airplanes.

A CAB regulation will permit Parks employees in an experimental course of specialized dual flight instruction to make one solo flight in light of and under supervision of a certified flight instructor without the usual paper work and fingerprinting.

No Safety Sanction—An official at CAB, explaining that the regulation meant "no reduction in safety," said the Air College plans to try out the plane—its has Esqueaux and may have others—on an average group of possibly as many as 500 en-

ployees to find their reaction to the use of control attributed to the type of craft.

The employee personnel making the tests will have the customary five hours of dual instruction required on two-control planes (the requirement is eight hours on light-control planes) before they will be allowed to solo. And if they wish to go on with their instruction after making the first solo, they must go through the usual routine of being fingerprinted, filing applications, and obtaining identification cards.

Tests Simple Planes—Asked about the report that Parks plan to sell Esqueaux after the war, CAB sources said they understood that the school intended to try other available two-control planes before making a decision.

Interest in this article by CAB was unwelcome, however, Washington officials realize the game that the test solo, which are to be made at all of Parks' scattered five schools, might prove informative from a safety standpoint.

Get Reports—CAB officials first urged the CAB to make the experimental flights possible with a minimum of routine when they appeared in connection with the Board's final line and local service hearings.

The CAB's warner of the usual restrictions so far as the test solo are concerned will be effective until next May 18.

Radar for Traffic

Partner application of military aircraft radar developments may be expected to result in improved changes in traffic control and flight regulations, James A. Biddle, Radio Corp. of America, told the recent St. Louis conference of the Civil Aeronautics Board and Manufacturers Association.

Biddle said, for example, that he expects a meter to be available for use in aircraft, a device which will indicate the course of the plane, whether the plane is on the course, or to the left or right of it. Instead of making the pilot dependent upon ground audible radio range signals.

Using high frequency signals, he says, eventually will replace present radio ranges, but the concept will be gradual. Biddle does not expect the dual power plane to be very different than those of the present. He said that, and that consequently pilot training requirements to be made available likewise will have few changes.

Contract Termination, Salvage Units Merge

Consolidated group of Army Service Force to be known as Road Salvage Division.

Contract Termination Branch and Redistribution and Salvage Branch of Army Service Forces have been merged into one department to be known as the Road Salvage Division.

Contract Termination Branch, formerly in the Purchases Division supervises cancellation of contracts necessitated by changing battlefield needs, and in a variety of other steps materials, improvements in models, and similar factors.

Equipment Closing House—Formerly in the Production Division, the Redistribution and Salvage Branch handles equipment transferred from Army branches having an overcapacity to other branches or war agencies that need such material. It also handles procedures under which surplus and salvage material are sold.

Heading the new division is Col. D. N. Rousseau, Ordnance Dept., who has been chief of the Philadelphia Ordnance district since 1941. His staff will include personnel transferred from other ASF divisions and from the Army Air Force.

Synthetic Rubber Used To Seal Gas Tanks

Use of synthetic rubber for gas-tight "overcoats" (overcoats) on bullet-proof fuel tanks in aircraft wings has been disclosed by Good-year Tire and Rubber Co.

W. C. Winters, manager of the firm's mechanical goods division, said large quantities of "Airform" are now being supplied several aircraft manufacturers for the light-weight overcoats "which can absorb any shrapnel wound. A gasoline which is not so hard as fuel tanks after it is pierced by a bullet and before the hole seals itself. These coats absorb the escaping fuel almost as soon as it leaves the tank."

Quarter-Inch Sheets—The famed synthetic rubber, Airform, is produced in sheets about a quarter of an inch thick and as the bullet-proof fuel cell is placed in the airplane wing or elsewhere, the sheets are fitted in it within the wing. Large quantities of natural rubber alternatives were provided for the fuel-cell coats before synthetic rubber was adapted to this use.

Plane Plant Deliveries Climb To 97 Percent of Schedules

Industry turns out 8,769 aircraft despite changes in design and constantly expanded requirements; Nelson cites results as proof of scheduling and follow-up policies.

By SCOTT HERSHY

Significant feature of aircraft production in November—a new high of 3,759 planes—in not so much that it has made “production miracle” an understatement as it is that deliveries were 97 percent of schedules.

The industry has vivid recollections of production months that exceeded all prospects only to lose that while production was good, it was still below schedule, a situation that has prompted uninformed critics of the industry to contend that the airplane makers were falling down on the job somewhere along the line.

Scheduling Policy Bears Fruit—In his formal report on November aircraft output, WPB Chairman Donald M. Nelson explains that scheduling and production follow-up policies, instituted and carried out by the Aircraft Production Board, have borne fruit with deliveries virtually on the accelerated schedule.

This comment is the more interesting in view of the fact that this program is headed up by WPB Executive Vice-Chairman Charles E. Wilson, whose immediate plans for reorganization were opposed by aircraft industry leaders. It does not mean, however, that it should not be overlooked, that an integral part of the success of this program lies, too, with the Aircraft Resources Planning Office, of which T. P. Wright is the head.

Miracle—As Nelson points out, the outstanding accomplishment of the aircraft industry and its workers is almost unbelievable, the increase in numbers does not tell the whole story. It goes back to July, 1940, when 872 airplanes were produced. More than twice that number were produced in two days in November, 1944, and the monthly total was more than 15 times that of July, 1940. During the 30 days in November, airplanes rolled out of our plants day and night, faster than

one every five minutes. Thus, the aircraft industry is producing 8,769 airplanes during the month, produced at an average rate of 326 each working day.

The new production takes on added importance in that the output was composed in large proportion of combat types of which more than 1,300 were four-engine bombers.

Weight True Measure—The true measure of the output is in the weight, not units, and the total weight, including spare parts produced last month was 81,940,300

pounds. This represents an increase of 35 fold from July, 1940.

While Nelson expressed satisfaction with the record, he said emphasis still must be placed on need by the Services for even greater numbers of yet larger planes, as not only more battle losses be made up, but striking power must be continually added to.

In Spite of Obstacles—“The Aircraft Production Board, in cooperation with the Service and the industry, is determined to increase aircraft output in spite of the obstacles presented by the continuing increase in size of planes, by shortages of manpower and by introduction of necessary changes in types and equipment,” Nelson said. “This will be accomplished by concentrating the efforts on production efficiency and manpower utilization.”

In this, Nelson has the support of the industry. James P. Murray, Vice-President and President of the Aeronautical Chamber of Commerce, in his recent annual report also pointed out that the increase in numbers is largely in heavier planes giving a vast increase in average weight of delivered airplanes.

Teamwork—Murray pointed out what sometimes is overlooked, that necessarily the engine, propeller and accessory manufacturers and sub-



RECORD-BREAKING PRODUCTION:

The production by General Motors' Chevrolet division of Pratt & Whitney engines is shown in this final assembly plant, one of 17 units in the Chevrolet manufacturing system devoted to this particular project. These engines are being prepared for shipment.

Beechcrafts at work



WHEN THE RAIN ROARS ON YOUR ROOF—and you are snug and warm—remember this picture of an AT-11 Beechcraft ready to take off as soon as the bombardier and instructor climb aboard with the bombight. Our Army and Navy airmen have to fight in all sorts of weather, and therefore have to take training instruction in the same assorted varieties of weather—by day and by night. . . . The safe return of these airmen from the stormy night skies depends largely on the skill and care exercised by the man and woman who designed and built this Beechcraft, and the thousands of its companion Beechcrafts being used by our armed services in training bombardiers, pilots, and navigators. Because all Beechcrafts realize and accept this responsibility, these military Beechcrafts, like their commercial prototypes, have earned under the most rugged conditions an outstanding reputation for dependability and efficiency.



Beech Aircraft



CORPORATION

BEECHCRAFTS ARE DOING THEIR PART

WICHITA, KANSAS, U.S.A.



MORE PRECIOUS THAN GOLD

Tantalum is one of the earth's rare and unique metals. Rare because it is mined in only a few spots in the world. Unique because it is the only metal that readily absorbs gases.

This ability of tantalum to soak up and retain gases—even while being subjected to intense heat—makes tantalum priceless in the manufacture of electron tubes.

Up until the time Heintz and Kaufman engineers built the first vacuum tubes with tantalum plates and grids, the electronics industry had to rely on chemical

"getter" to absorb gases. These chemicals are not stable—the heat from an overloaded plate causes them to release gas suddenly, and the tube goes dead. One of the reasons you will find so many Gammatrons in use where dependability is essential, is that all Gammatrons have tantalum plates and grids. They can and do take heavy overloads safely—penetration which would cause any other type of tube to cease functioning.

HEINTZ AND KAUFMAN LTD.
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Gammatron Tubes



TANTALUM
(ATOMIC WEIGHT—182.06)
IN ANIMAL AND POWDERED FORM

contractions have performed about with the major aircraft manufacturers, since they all go together to make up the finished plane.

Boeing, for example, set an all-time record for production of Flying Fortress last month. Production was almost ten percent higher than for October.

► **Contributing Factors**—P. G. Johnson, Boeing president, said the record was made possible through further increases in employment, fuller development of the branch plant program and continued improvement in the company's quality production technique and manpower utilization. Johnson emphasized that there must be a further substantial increase in December.

Another example of factors contributing to the output was the report of M. E. Coyle, Chevrolet general manager and vice-president of General Motors Corp. He announced a new all-time high for aircraft engine production when Chevrolet Motor division turned out the latest single month's production ever obtained in the aircraft engine field. ► **Engine Record Set**—Coyle said the mark was set in the production of 1200-hp 24-cylinder engines, pointing out that Chevrolet's first Pratt & Whitney engine was completed just 20 months ago.

An interesting phase of the month's production picture was an unusual announcement by the Navy Department that they accepted well over 2,000 airplanes and then added "in fact we received almost 2,000 fighters and bombers."

► **New Fighter Types**—Fighter production was especially pleasing to the Navy, particularly in view of the fact that the Navy introduced two new types of fighters this month: Chance Vought Corsair and the Grumman Hellcat, and such changes in production always cause delay.

Navy said contracts on schedule or ahead of schedule during November were Chance Vought division, United Aircraft, the Eastern Aircraft division of General Motors Douglas, Grumman, Consolidated Vultee, Martin and Vega (now consolidated with Lockheed).

Navy Maps Policy on Contract Termination

Kees announces Cape, Lewis L. Strauss to head rearmament group.

In order to bring Navy Department activities in line with government policies on contract termination,



BREWSTER BERMUDA ON THE WING:

The unusual flight photograph shows the Brewster Bermuda dive-bomber, camouflaged and carrying RAF insignia. Wing boots are carried as standard. Brewster's production, which has been under investigation, has showed marked improvement in recent weeks, say Washington officials.

property disposition and related matters. Secretary Kees has established the position of Assistant Chief of Procurement and Material, for Industrial Readjustment and appointed Capt. Lewis L. Strauss to the new office.

Capt. Strauss will have under his direction the establishment, supervision and coordination of all Naval policies and procedures regarding

contract termination and related matters. He will have additional duty as special assistant to the Under-Secretary of the Navy and the Vice-Chief of Naval Operations in order to discharge his responsibilities. Capt. Strauss reported for active duty with the Bureau of Ordnance in February, 1941, as staff assistant to the Chief of the Bureau on technical matters.

Ryan Suggests Plan for Utilizing Surplus Planes, Plants After War

Urges in statement that warcraft be held in reserve for emergency rather than dumped on market; wants U.S.-built factories used as vast storage warehouses.

Attitude of the aircraft manufacturing industry on disposition of surplus aircraft and of government-owned aircraft manufacturing facilities—a major problem—is beginning to crystallize to some extent, although there is by no means unanimity of thought.

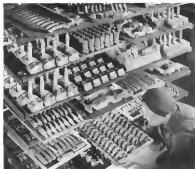
The industry does appear to be agreed on two points—they want no dumping of surplus aircraft on the market and they are opposed to the government taking over and operating war-built plants for aircraft manufacture.

► **Views of Industry**—Various views have been expressed by industry

leaders, most of them informally, but T. Claude Ryan, president of Ryan Aeronautical Co. and head of the Aircraft War Production Council, West Coast, has come forward with some concrete suggestions which, because of his position in the industry, are bound to receive close study.

Ryan proposes that factories, built by the government for war production and not needed for airplane production after victory, be taken out of production and used solely as government warehouses for storage of left-over war planes.

► **Plant Disposal**—As regards the



MOLDS FOR AIRCRAFT ENGINE PARTS:

Looking like pastries produced by a master baker, these curved forms wait to be poured with molten magnesium. These shapes above are ready for the pour at a magnesium foundry. "Disciplined" of special core sand, these units are hardened, then aligned inside the molds to create the forms for the casting of intricate engine parts from molten magnesium.

plans, Ryan points out that they were built primarily as weapons of war and that their cost is justified as a part of winning the war. At the same time, he does not believe the cost will have to be entirely written off. They would be of value as reserve facilities, ready on short notice in case of any future threat of war.

Ryan believes these plants, properly cared for, should remain in serviceable condition for 20 to 30 years, depending on their type of construction. Contrary to this view, there are government economists who believe a large number of these plants will have no postwar utility, particularly those of emergency construction.

Storage Facilities—Many are adjacent to plants owned by established aircraft manufacturers and Ryan believes it would be wise for the government to make provision whereby portions of these plants could be taken over from the government periodically as required by aircraft manufacturers.

Turning to the storage of surplus warplants, Ryan contends that would have a parallel advantage for a period of years, somewhat less than

that involved in the facilities due to the fact that development in design will make current plants obsolete, in Ryan's opinion "in four to ten years at the outside."

Emergency Value—However, even if part obsolete, he takes the position that they would prove tremendously valuable in an emergency because of the large number immediately available and that after more up-to-date types were made, they still would be useful in wartime for transport and training.

On this point, Ryan finds himself in disagreement with some other industry executives who, while opposed to any plan that would bring about destructive and virtually fatal effects on the industry of changing these plants on the market, also are a disadvantage in having plants in storage as a possible dumping threat over the market.

Free Enterprise—As to speculation about the possibility of the government using war-built plants to set itself up in the aircraft manufacturing industry, Ryan expressed the common view of the industry when he commented that "if this happened, it would be, of course,

throwing overboard our American free enterprise system."

The fact seems now to be finally accepted, as Ryan points out, that our national security can be safeguarded only by maintaining aircraft manufacturing and operating on a large, healthy basis.

Takes Medium Ground—Ryan takes the position of most sound armers that the future of the industry lies somewhere between the views expressed by aviation enthusiasts who permit their imagination to run wild on one hand, and those prophets of gloom on the other who predict a complete collapse of the aviation industry as soon as war orders cease.

He contends that the rising curve of aircraft production which existed before the war should be peaked up at a point higher than where it was broken by the war-imposed demands. Ryan is of the belief that if aircraft development, private ownership and other commercial utilization take place on the scale that is feasible and within the grasp of the country, there should be a large, sound and continuously expanding aircraft manufacturing industry in the United States.

Outlook—Ryan expressed his views on essential points in postwar aviation, in a specially prepared paper to meet various requests for aviation prospects. In it he emphasized that we should have no illusions that the almost unbelievably vast scale on which aircraft are manufactured for emergency demands—estimated at seven times the dollar volume ever reached by the automobile industry—can continue and that it must be adjusted to proportions that the peacetime market will justify.

Readjustment Needed—"Air transportation and manufacture," he said, "might well lead in postwar readjustment and the re-employment of our people."

In that connection, Ryan holds that a strong air transport system, government-aided in its early stages, but privately operated will keep the aircraft industry strong enough to discourage any other country from trying to outbid the United States.

Privately-Owned Aircraft—The scale on which private-owned aircraft will be used after the war, one of the industry's highly controversial subjects, will depend, in Ryan's opinion, on individual economic prosperity, rapidly with which some of the more important technical developments can be adapted to peacetime uses and whether the government establishes a sound plan of encouraging private ownership and operation of aircraft.

The Light that MUST NOT FAIL

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Pull... Pull... Slide... Pull and pull again. So it goes, as yards of silk safety chutes pass over a trusted glass window. Through it, a powerful light blooms while glass eyes search every stark detail of triple-stitched seams, alert to detect any chapped stitch, break or snarl. This is a light that must not fail... for here, truly, life hangs on a thread. * * * Switlik workers are exceedingly proud of their contribution to the jumper's anxious confidence during those moments of literal "suspense" between plans and earth. * * * The skill these craftsmen have developed is a tribute to Switlik engineering methods in designing "the best parachute that can be made"... and setting new records, as well, for production and delivery of this Switlik Safe-T-Chute. * * *



Air Power is winning the war... The more know you buy... the more know they fly!

SWITLIK PARACHUTE COMPANY
Trenton, New Jersey

Bendix Speeds Output Of Air Instruments

Reports 375,000 units a month issued on by Bendix-Prescott division.

Production of more than 70 basic types of scientific aircraft instruments and engine components—at a rate of 375,000 units per month—has been accomplished since Pearl Harbor by Bendix-Prescott division of Bendix Aviation Corp. and subsidiaries.

Raymond P. Lanning, vice-president, is doubling the production rate, and that measured by dollars volume, the division's total monthly output has increased more than seven times over pre-Pearl Harbor levels, while unit deliveries have increased as much as 200 times over 1941 levels in many instances.

Operations 36 Plants:—The division one of the largest units of Bendix corporation, operates 36 plants from coast to coast. Lanning said. The Bendix-Prescott division now is a center for engineering, development and manufacture of the greatest variety and volume of precision aircraft equipment produced in history.

One of the chief centers of the production is at Torrington, N. J., where the division develops and manufactures such equipment as aircraft engine starters, generators, and hydromatic pumps, auxiliary power units and a complete line of engine instruments. The division also produces magnetos, alternators and other non-ferrous metal components in its own facilities. The main products are optical lenses and prisms.

Floor Space Doubled:—In two years, Lanning said, the division in its New Jersey plants has doubled its operating floor space and total number of employees. Five new plant structures, in addition to the one already in operation before America's entry into the war, have been purchased, built or rented in operating New Jersey communities to accommodate overflow of production and other activities that overtook the capacity of the main Torrington plant and its branches.

An intensive program of subcontracting has played a major role in achieving the required production volume of aircraft equipment developed by the division's engineers.

New Production Equipment:—Bendix engineers, Lanning said, have concentrated on designing and developing special production equipment designed to make efficient performance by newly trained workers

He cited 76 designs of various machines devised and 400 machines specially built to simplify manufacturing processes. Examples of approximately 30,000 special tools or modifications of tools to lessen complicated production problems, transferred at about 25,000 tools and as many as 40 various complete "special" machines to subcontracting firms and purchase of 2,888 machines and test devices.

New Franklin Orders

Brazil buys Alcocked Motors Corp. engines for primary trainer planes.

Alcocked Motors Corp., of Syracuse, N. Y., received two new orders for Franklin aircraft engines, indicating increased use of this type on primary training planes.

It was disclosed that the Brazilian government has purchased a quantity of Franklin 85 hp engines, which will be used to power training planes in which Brazilian military and naval pilots receive primary instruction. These are essentially identical, air-cooled engines

of the type identical to light plane operators in this country.

Replacement Engines:—War Training Service also has ordered a substantial number of Franklin engines for replacement purposes in its primary training planes. This order includes two models, one 85 hp, similar to those in Brazil and the other a 90 hp model.

These orders are in addition to continuing production of several other Franklin engines designed by Alcocked Motors for the Army Air Force.

Job Placements

The United States Employment Service during July, August and September found jobs for \$10,000 in the aircraft and aircraft parts industrial, of which 104,829 were women.

In a report of its activities the Service said 13,196 were assigned work. Production and management staff total was 2,307, service employees numbered 5,179, clerical and sales 19,763, skilled 55,858 and semi-skilled 47,515.

Parts Group Grows

Eight new members have been added during the past month to the already influential Aircraft Parts Manufacturers Association in Los Angeles. They are Avrobell Bell and Ross Co., of Pasadena, and New Los Angeles Screw Co., of Culver City. Previous members include: Quality Engineering Works, Inc., of Southfield, Michigan; and Plastic Co., of Western Ave. Welding, Inc., and Western Screw Products Co.

Labor Saving System

Substantial labor savings in various Douglas aircraft production departments are reported by Henry E. Guerin, plant manager, through a new technique of pre-fabricating raw stock at the mills to specific shapes.

With the mills pre-shaping raw shaped materials, he explained, cutting of flat stock at the plant is reduced, saving manufacturing man hours, while eliminating return of traveling and surface scrap efforts as saving in transportation.

Guerin said this step is in line with the Douglas policy of utilizing manpower in direct assembly to the fullest, and that it is a refinement of the final labor pool dispatch system

PERSONNEL

Two appointments to the research and planning staff of Chicago and Southern Air Labs were announced. New assistant to the director, who has not yet been named, is Thomas Maxwell Miller (right), for the past 17 months



with Duns & Bradstreet in Houston, Fort Worth and Dallas. His work in the new departments of Chicago and Southern will consist mainly of compiling statistical data in connection with new route applications.

The other appointee to this staff is Henry George Howell (left), who will act as a consultant in planning power needs in Mexico. Howell's background in Mexico includes experience as a consultant with the Services Aeronautiques. He has recently been with the U. S. Naval Reserve at Great Lakes where he gave instruction in basic flying Headquarters of both Howell and Miller will be in Memphis.

Al Williams, former Naval and Marine Corps pilot, now with the aviation department, is starting on another tour of duty at Army Air Force flying schools to coordinate precision flying for military and civilian pilots. Williams will coordinate a routine of operations, and will also be in a lighter type aircraft. Following this, he will explain in informal talks, the experience of such operations in flying fighter planes. He will operate from the Fort Worth, Tex., headquarters of the Training Command.

James Chas., director of CAAA Pre-flight Aerobatics Program, has been awarded a Doctor of Laws degree by Oklahoma City University for his services to aviation education.

This degree was the first honorary degree conferred by the University in seven years. The first course in the country for training high school aeronautics instructors was offered by Ok-

lahoma City University, which also has participated in the CAA pilot training program for several years, and operates its own airport.

George B. Carr, Jr., San Francisco area traffic manager for American Airlines, has been appointed general traffic manager of American Airlines de Mexico. The appointment was made in Los Angeles by A. B. Bean, Jr., western traffic manager. Carr has been with the air line since 1931. He is succeeded in San Francisco by Bill DeWane, with American for the past year, and for fifteen years previous, associated with U. S. Lines' Panama-Pacific Steamship route.

Mary Winkler, of Atlanta, Ga., has been appointed chief stewardess for Delta Air Lines.

The daughter of Mrs. L. W. Winkler, of Atlanta, she attended Bryn Mawr College in Bryn Mawr, Pa. Miss Winkler, formerly named Della, in September, 1940, and has been flying as regular stewardess for the past 14 months. She married Miss Annette Adams, who resigned to be married.



NEW WRIGHT FIELD BOSS:—Col. Rudolph Field, who assumes post of commanding officer of Wright Field, with the departure of Col. E. M. Robbins to an unobscured command post, is shown above. He was formerly commanding officer of the equipment laboratory at the field



Richard J. Robbins, Jr. Born

Vietnam shifts in station management personnel were announced by United Air Lines. A. E. Madsen, station manager at Alhambra, Cal., has been transferred to the dispatch office at Los Angeles Field. He is succeeded by Eugene Robbins, Jr., former station assistant at Alhambra. Mr. A. E. Madsen, acting station manager at North Platte, moves to Cheyenne as assistant to the station manager. His successor at North Platte, Mr. J. M. Dwyer, formerly at South Bend, Ind., whose place is taken by J. Dwyer Ross, station assistant at Des Moines.

In line with reorganization of support maintenance facilities both in Miami and along the Latin-American routes of Pan American Airways System, the office of construction engineer, headed by Frederick S. Githens, was disbanded. Mr. Githens was named superintendent of airport and maintenance for the Caribbean area. Githens was construction engineer for Pan American's first project at Key West. Concurrently W. E. Githens was named district superintendent of airport and maintenance for the Caribbean area, with W. E. Thomas as his assistant.

Southern California Shoring Assn. elected M. J. Mladof, chief designer in development engineering at Vultee Field, as a director of the organization. Mladof has been at Vultee Field since July, 1939, and is a former director of the Shoring Society of America.

Mij Jaka Mladof has been relieved after two years of duty in public relations work at Vultee Field. Major Mladof has been selected to set up a new public relations department for the newly activated West Coast branch. He will have quarters, Army Air Force Hqs. will be located at Redoubt Station No. 3, Santa Monica, Calif.

E. L. Hall, formerly elected engineer at the Westchester plant of the Anthony Ludlum Shoring Co., has been appointed chief engineer of all plants of the corporation, according to a recent announcement by F. B. Lounsbury, vice-president, manufacturing



**America's New Source of
Aluminum • Ingot • Sheet
Extrusions • Wire • Rod
Bar • Forgings • Tubing
Foil • Powder . . . and
Finished Aircraft Parts**

Shortening the steps from Bauxite to Bomber . . . Having built the first and only plant in the country where bauxite comes in at one end and aluminum sheet rolls out the other, Reynolds now carries the process still farther . . . making finished aircraft parts right at the aluminum source.

Since scrap from these parts averages 30%, Reynolds pre-fabrication saves aircraft manufacturers valuable storage space and labor . . . saves America precious shipping space and inevitable waste in handling. Reynolds turns out finished parts, quicker . . . and puts the scrap "back into the scrap" immediately. For "flying aluminum," call for a Reynolds Sales Engineer . . . available throughout the United States.

REYNOLDS METALS COMPANY
PARTS DIVISION • LOUISVILLE • KENTUCKY
GENERAL OFFICES • RICHMOND • VIRGINIA
28 PLANTS IN 13 STATES



Reynolds aluminum and finished airplane parts start in this Alabama bauxite mine. Reynolds mines more bauxite per year than had ever been mined yearly before the war in the United States.



Aerial view of Reynolds plant at Letchfield, Alabama: three bauxite is refined into aluminum; the aluminum is reduced into aluminum; and the aluminum is cast, alloyed and fabricated into sheet and rod.



Reynolds rolled aluminum alloy forging stock, heated and Army-Navy inspected, ready to be forged into aircraft products.



View of the Reynolds 200,000 sq. ft. expansion at the Parts Division in Louisville. New equipment includes four 3,000-ton hydraulic presses.



**REYNOLDS
ALUMINUM**
OUT OF THE GROUND INTO THE SKY

REYNOLDS
ALUMINUM
CORPORATION

HUNTER HEATER READIES MOTOR ON COLDEST DAY IN FEW MINUTES

Quick on Duct Connections
For Easy Set-Up of
"Cold-Starting" Device
BURNS ANY TYPE OF GASOLINE



CLIVLAND, OHIO—Details of a gasoline heater made by Hunter and Company of this city for preheating an oil engine quickly in starting in winter in service weather have recently been released for general distribution. Although designed for the Hunter device are an lightweight, simplicity of construction, the ease with which it can quickly be set up and taken down, and the fact that it operates on any type of gasoline fuel.

The heater preheats, weighing approximately 45 pounds, delivers 25,000 Btu. per hour and pre-heats fuel and oil, and the engine, by means of flexible ducts. This makes a possible to pump hot air over a cold engine in sufficient volume to bring it up to an operating temperature in a matter of minutes, even in sub-zero weather.

Flexible ducts are provided which connect the heater to the heater opening of an engine cover, or down to the exhaust. They can be so designed that they can be quickly attached with the aid of a simple bracket provided with the equipment. Allowance is made for the heater being placed in any position. Special hoses are available for delivery of heat to other locations.

Simple heating and regulation of the air within the exhaust area makes an area heating of all parts of the engine. Thus where the engine controls have been brought to proper temperature, the oil and cylinders and valves also are preheated to a degree that starts power at once at the lowest engine speeds when the engine starts.

This simple heater can be detached from the flexible ducts and set inside a plane cabin, or used to blow hot air over an area where mechanics are working in late temperatures. For a number of special services in addition to its main job.

Complete information on the Hunter Preheater may be obtained by writing to Messrs Hunter & Co., 1540 E. 17th Street, Cleveland, Ohio.

working stock, compared to 33 cents a share in the previous fiscal year.

Revenues Up—Commercial operations showed gains, although a decrease of 15.55 percent occurred in revenue miles. However, gain percentage occurred on expense revenue, which was 223 percent over the year ended June 30, 1942. Expense pounds were 147 percent higher.

The total passenger miles for the 1943 fiscal period was 60 percent higher than 1942. Revenue passenger miles were up 46 percent. Passenger revenue was \$650,734, or 56 percent higher than the previous year. The company's first time the first time in the company's history the level of mail revenue. The mail figure of \$486,118 was 7 percent below 1942 mail income.

Despite the drop in mail revenue, increases of 68 and 87 percent were shown respectively for pounds of mail carried and mail pounds operated.

Load Factor of 78 Percent—Commercial passenger load factor was 78 percent for fiscal 1943, a 58 percent increase over fiscal 1942. With half its equipment new to the 19393, the line flew about 30 percent of the previous year's revenue miles.

Thornell C. Drimwater, executive vice-president, credited three factors for the increase in net income, which he estimated as "subject to any adjustment that may be made by Army Air Forces auditors of the general accounting office," or through renegotiation of Army contracts. The three were increases in passenger load factors and revenue passenger miles and expense miles, elimination of round trip and air travel plan discounts effective July 1, 1943, and income from army contract operations.

Not Representative of Peacetime—The report, commented Louis H. Mueller, chairman of CAL's Board of Directors should be analyzed "with care, in view of the company's operations as a wartime," and not regarded as representative of the company's activities under normal conditions.

Budd Reports Refund Of 15 Million to U. S.

Manufacturing company runs in \$9,000,000, wheel firm \$5,750,000.

Renegotiation of contracts by the War and Navy prize adjustment boards resulted in refunds of about \$14,000,000 by Edward G. Budd Manufacturing Co., and Budd Wheel Co.

Edward G. Budd in a letter to stockholders and the refunds included \$9,000,000 by Budd Manufacturing Co. and \$5,750,000 by the Wheel company.

Money Taxes Cited—Budd said actual "refunds after tax credits" amounted to less than \$4,100,000, explaining that the balance would have been recaptured by the Government in excess profit taxes if the refunds had not been agreed upon.

He said the refunds left 1943 profits of Budd Manufacturing, reported as \$5,222,934 before renegotiation, at \$2,721,939 and Budd Wheel, \$2,352,540 before renegotiation, at \$1,140,289.

GM Production Rate \$12,500,000 Daily

Fifty percent of output is in aircraft field, Wilson reports

Approximately one-half of General Motors' current war production is in the aircraft field—complete planes, engines, propellers, sub-assemblies and parts.

C. E. Wilson, president of General Motors, reports the corporation is producing war materials at a rate exceeding \$12,500,000 a day.

2,200 Items Produced—The corporation, Wilson reports, with its network of subcontractors and suppliers, produces more than 2,200 separate items for war use. These range from ball bearings so small that it takes 3,000 to fill a thumb to 36-ton tanks. There are also such items as machine guns, bulletproof fighter planes, Army's largest bombers, aircraft and aircraft engines.

Ramsay Lauds Corsair

Rear Admiral DeWitt C. Ramsay, chief of the Bureau of Aeronautics, an aircraft service, and the Army Navy "E" to the Chance Vought division of United Aircraft, told workers the Corsair "is making aviation history."

He cited his specific reports recently received from a Marine Air Wing: "The Corsair can climb faster and better and has more speed than the new Zero. Moreover, we are amazed to reach better than the Zero that it flies does not knock us down. In our first encounter with enemy craft recently, four Corsairs, piloted by Marines, partly destroyed and turned back a flight of 15 zero-type bombers escorted by 35 to 38 Zeros.

THE AIR WAR

COMMENTARY

Axis and Allies Step Up Research To Produce Best Fighters, Bombers

Germany, fighting on interior lines, has edge on logistic situation but Allies are gaining upper hand in matter of numbers.

Until the war is concluded by a clean-cut decision, the struggle for better fighters and bombers will continue at breakneck speed. At present, the Axis powers have the edge in the logistic situation, fighting on interior lines, and able to shift their air strength with reasonable facility as various points are threatened.

In the matter of numbers, the Allies, despite 3,000- to 35,000-mile supply lines, are beginning to have the upper hand. As to quality, in spite of the undoubted excellence of the Luftwaffe's latest ME-109 and FW-190 series, the JU-88 and ME-410 and night fighter-bombers, and the improved jet fighters, Messerschmitt (formerly Heinkel), and the P-51 Mustang, are giving the Axis a slight edge. However, Germany's extensive aeronautical research facilities, equal to or less than four power "Weight Pairs," may pull some rabbits out of the hat which, temporarily at least, could throw victory in Germany's favor. The Axis air campaign just now getting into high gear.

Speedy Improvements—In modern air warfare, speed in adopting the latest battle-tested improvements is of the essence. It is a fact that America's gigantic aircraft production set-up, now racing at the breath-taking speed of a limited airplane every five minutes, now to attain a rate of 10,000 per month, is also elastic enough so that the improvements come through as fast as in the combat planes that day's production of a particular type may be slightly better than that of the previous day.

How the Chance-Corona Through—To get the life-or-death improvement into the war with all possible speed takes organization and teamwork of the highest order. At the top level is the Army Air Forces, two divisions of the Air Staff share this important responsibility. One is

headed by the Assistant Chief of Air Staff, Material, Maintenance and Distribution, Maj. Gen. Oliver P. Roberts, who has just returned from an extensive tour of the air combat theaters Gen. Roberts, after observation and consultation with our leading air officers on the spot, has up to date information on the performance of the planes, engines and related equipment now in operation, which were designed, produced, tested and modified under the jurisdiction of AAF's Material Command, Wright Field, the Proving Ground, Cincinnati, and the Air Force Tactical Center, Orlando. At all of these places returned aircrew from the fighting fronts are giving the front of their hard-won experience in developing the best types of

equipment and tactics for fighting the Axis or the Nazis.

Flowing the Cashewes—Another corps, not as well known, is the office of the Assistant Chief of Staff, Operations, Commitments and Requirements (O, C & R), Brig Gen. Howard A. Craig. The comprehensive functions of this division include, among others, that of finding out what the boys who are fighting our war in the air really want, and then seeing that they get it. Reports are constantly flowing in, and these may be checked with newly returned officers and experts.

Through Gen. Roberts' Material, Maintenance and Distribution division (M, M & D), the changes can be made with a minimum of delay through the distinctive American system of modification centers set up by each aircraft manufacturer, maintained by the company or by others, whichever is the most efficient in any given case. Gradually the changes are worked into the next series on the regular production line and in the meantime still further improvements are being slipped in at the "modification" line. Examples include additional guns, change of gun position, electric targets in the nose to meet head-on attacks, long range drop tanks, improvements relating to instrumented, safety, emergency escape, deactivation of sound, new spots for armor plate, etc.

General Ramsay's "Musts" — An



INSIDE AN AIRCRAFT CARRIER

Hangar deck on a new U. S. Navy aircraft carrier, seldom photographed, is shown here in February with a storage hold under supplies can be put in proper places. Photo gives an indication of the staggering amount of material needed by a flat-top for a long war. Planes are in the background.



OUTREACHING means OUTPUNCHING

• The largest streak of fighting in the world is flashing through the door! Super-range Lightning P-38 fighter planes team up with heavy bombers to deal knockout blows at distant targets.

On the production front smoothly-operating teams of Rohr production fighters work round the clock to help Lockheed put more and more of these outstanding P-38's on the wing. They use their skills to add new punch behind the challenge of increased production. They work to save the lives which will be spared by quicker victory.

HELPING TO WRITE THE STORY OF TOMORROW

ROHR
AIRCRAFT
CORPORATION



CHULA VISTA, CALIFORNIA

outstanding example of the value of first-hand observation and report is the list of "sunk" submarines Gen. Arnold dropped on the aircraft industry after his visit to England in 1942. It is the rapid incorporation of these features which enabled this country to catch up so rapidly, and which served to give our armies a greatly needed advantage during the early delaying actions of the first few months of our war with Japan. These included self-sealing fuel tanks; armor protection for pilot, crew and vital parts of the plane, turret and heavier calibre guns and aerial cannon, power-operated turrets for bombers, supercharged engines and improved oxygen supply for high altitude operations; and improved landing gear, automatic pilot and navigational instruments for long-range, all-weather operations. Many of these were worked in quickly; others, requiring longer research and development, are just coming into the picture. All are a result of battle-tested ideas.

Further Improvements Ahead—It is impossible to get full details of many items of which fascinating hints have been dropped from time to time, but which will be coming clear on the warplanes of the not too distant future. Six-blade counter-rotating props, engines of 2000 hp and higher, more powerful fuels, pressurized cabins, remote fire-control, jet propulsion and rocket devices—these and other items are the subject of strenuous research by all the leading powers.

—NARRATOR

Planes Score Heavily In U-Boat Defeat

Major role revealed in annihilation of anti-sub patrol job by Navy.

Coincident with announcement that the Army Air Forces had withdrawn from anti-submarine operations and that the Navy had assumed full responsibility is a compilation showing that aircraft scored heavily in submarine sinkings in August, September and October.

During this period, 21 enemy submarines were sunk by carrier-based airplanes, one by a long-range Navy patrol plane, one by Army and Navy aircraft working together, one by carrier and surface craft working together, one by Army aircraft and two by destroyers for a total of 22. Sixty submarines were counted as officially destroyed by United States and British forces during the three months.

90 Sunk in Three Months—Navy officials pointed out that during May, June and July, United States and British forces destroyed 90 U-boats. U. S. Naval surface craft claimed two, naval surface craft and naval aircraft combined six, carrier-based planes nine, an aircraft carrier, one, five by Army aircraft and eleven by Navy long range patrol planes for a U. S. total of 29.

Navy Takes Over—The Navy has now acquired sufficient planes and trained sufficient crews to take over

complete responsibility against the submarine. Army plane operations against U-boats were all land-based and operated in connection with several theaters of operations.

Japans in the battle against the submarine has been a lively campaign since Pearl Harbor. An outgrowth of the First Bomber Command, which since Dec 8, 1941 has been engaged in anti-submarine activities, the Army Air Forces Anti-Submarine Command was activated in October, 1942, under Brig. Gen. Westside T. Larson.



AAF'S FLYING NURSES ARE NOW IN CHINA:

These scenes at the Army Air Forces' School of Air Evacuation show stages in training flight nurses for transporting wounded troops. The Army has just announced that the first unit has arrived in China. Equipment for training includes a mockup of a DC-3, in front of which slides are shown classifying patients by means of white field tags. Other scenes picture a sergeant demonstrating to flight nurses how to convert a standard Douglas transport into an ambulance plane in eight minutes.



Free Enterprise

THE OPPORTUNITY AND OBLIGATION TO COMPETE

WE can be prosperous beyond our dreams—all of us—workers, farmers, and business men—but one of the prerequisites is the self-discipline of accepting competition for ourselves as well as others.

Free enterprise does not imply the freedom to use any or all means to make a profit. It does not mean the right to monopolize. It means the opportunity and obligation to compete.

Competition requires independence of action, free access to the market, and no large degree of control over the price by any buyer or seller. In general, the larger the number of sellers and the more easily buyers can shift from one seller to another, the higher will be the degree of competition (and vice versa for buyers).

But let us not get too academic or go off the deep end. We cannot have perfect competition. We cannot subdivide businesses and labor unions into tiny units to make a multitude of buyers and sellers in each market; we cannot reduce our rich variety of products to a few rigidly standardized items; we cannot educate people to judge quality precisely; we cannot eliminate the costs of bridging space between buyers and sellers. On the other hand, have we gone as far as is practical and desirable in these directions?

We cannot even have a system of highly "artificial" prices, that is, prices which fluctuate immediately in response to every minor change in demand and supply. This would occur in the dream world of competition-to-the-death-degree. It cannot occur in the real world, or even in the ideal world of competition best suited to physical facts and human qualities. The economies of large-scale enterprise, the need for adapting products to human wants, the costs of transportation and the costs of issuing and requiring market information put severe limits on price sensitivity.

Economists tell us that if prices were extremely sensitive, business hours and depressions would be much less severe—provided our stock of money remained fairly constant, that with the somewhat limited degree of sensitivity which is practicable in the economy, price and wage changes cannot prevent severe declines in

business activity. We cannot count on competition alone to cure depressions. We must look mainly to other kinds of measures to prevent mass unemployment of men and machines.

If we cannot have prices which fluctuate with every small change in demand and supply conditions, we can work toward—and achieve, if we really want it—a system in which prices and wages are at least roughly responsive to long-run changes in demand and supply, a system in which most markets are not dominated by individual businesses, groups of businesses, labor unions, or farm organizations, and in which prices and wages are maintained at levels consistent with free access to markets and to jobs.

In any kind of an economic system there must be some means of determining prices, wages, and profits, and of bringing labor and capital into employment in the industry and place where they are most needed. There are two ways to do this: by administrative fiat or by the impersonal processes of the market. The first of these is typical of the totalitarian state; it frequently involves destruction of individual freedom or fumbling mismanagement. During the war all of us have had some experience with price-fixing and paternalistic treatment by the state; we have found out what it means to be pushed around by bureaucrats; and we have discovered that the political determination of prices, wages, and profits leads to chaos when self-interest supersedes the fear of punishment—as it eventually does. I do not mean to imply that we can do without controls over price, production, and distribution in time of war, but I do suggest that we can learn something from their operation. Even with a well-aided national purpose these controls work badly when human abilities are inadequate for the impersonal task, when personal or departmental jealousies creep up among officials, and when pressure groups try to pry on the seat of the public. Every day some Americans are beginning to understand why our freedom has faded the capital and tyranny of power.

The impersonal processes of the market in determining prices and wages and in allocating productive resources will, in normal times, save us from the fumbling of bureaucrats and from the abuse of confusion, un-

certainty, and anarchy produced by their regulations. But these market processes will not save us from paying toll to those who monopolize and restrict entry to markets or jobs.

If we want an economy in which we are free to try out new ideas, develop new products, and introduce new efficient methods of production, if we want an economy in which there are great opportunities for uses of imagination, inventiveness and energy, if we want an economy wide open to progress, then we must have a free field and fair competition for all concerns—without collusion as to prices, markets, or production. This is the only basis on which we have a right to demand freedom from governmental regulation for ourselves and on which we can combat monopolistic tendencies in other quarters.

Let us stand squarely for the principles of the anti-trust laws and against all collusion and combination in restraint of trade. Let us insist that the government move with a critical eye every combination and consolidation which might restrict competition. Let us face frankly the problems of economic power arising out of price leadership and encourage every honest effort to find means to deal with them. Let us not shrink from questions as to whether some great aggregations of plants are too large for efficiency, free entry into the industry, and a free price. While we root the efforts of the Department of Justice to extend the anti-trust laws by fortified and distorted interpretation, and while we fight every attempt to use them as a tool of persecution, let us cooperate in sincere efforts to modernize these laws and extend them by specific legislation to monopolistic practices they cannot now reach. I do not have a simple formula for this, but I believe we must try to find one.

We can then, better face the problem of the growing monopoly in labor which is threatening to make the free enterprise system unworkable. Today labor is going through a stage of empire building reminiscent in some ways of a similar stage in business three-quarters of a century ago. Without the same business spirit, the same concentration on selfish interests, and the same disregard for the public welfare. Business leaders learned the hard way that the public will eventually tear us apart those who prey upon them. Will our labor leaders be wiser? The right to collective bargaining to protect the weak position of the individual employee is one thing—but the grant of unlimited monopoly privilege to combine into a private government which can dictate its own terms to business, industries, communities, and even to the government itself, and which can start a wage-price spiral such as to hinder the war

effort and make full prosperity impossible in time of peace is something quite different. We need to find a middle way which will prevent employers from exploiting employees but which does not sow the dragon's teeth. The exercise of arbitrary power by labor threatens not only business, but also all workers outside the unions and all those dependent on pensions and savings for their sustenance, and ultimately, of course, the well-being of many workers themselves.

The idea that the labor problem can be solved if great, powerful organizations of employers will sit down with great, powerful organizations of labor is a delusion. If our experience in the N.R.A. and in the war teaches us anything, it is that the best that can be expected in the long run from such a situation is an armed truce with intermittent civil war. And every truce would be a monopolistic arrangement to take advantage of those not members of the great organized groups. Business and labor unions, whenever confronted with past war readjustments that are unfavorable to them will be sorely tempted to protect their own special interests at the expense of the public. There will be efforts on the part of businesses, abetted by labor unions, to limit productive capacity, to raise tariffs, to extend subsidies, and to maintain prices at artificially high levels. The unions will oppose labor saving changes and will seek higher wages even in areas and industries of surplus labor. Already demands are emerging for direct price action by business, labor, and agriculture to solve the transition problems of special concerns to them. While these groups should have every opportunity to register their own self-interest, we cannot entrust our life to decisions made by private groups. If experience is any guide, such conditions will be almost certain to restrict opportunities for progress and expansion, to exploit the public, and ultimately to injure even the business, workers, and farmers included in them. We cannot afford a postwar N.R.A. Resort to temporary government regulation is the transition from war to peace may, however, be necessary in cases of great hardship.

We can be prosperous beyond our dreams—all of us—workers, farmers, and business men—but one of the prerequisites is the self-discipline of accepting competition for ourselves as well as others.



President, McGraw-Hill Publishing Company, Inc.

State Rights Faces Test in PCA Action

AA also protests Michigan Board's authority in granting helicopter franchise.

Philadelphia - Central Airlines' challenge of the Michigan Board of Aeronautics' authority in granting a helicopter route franchise to Great Lakes Skyways, Inc., is seen by the state board as a test of state's rights, according to word from Lansing.

It was disclosed in Washington, meanwhile, that American Airlines, also has protested the Aeronautics Board's action, to Gov. Harry P. Kelly.

Protest—PCA's petition, protesting the franchise granted to the Great Lakes Greyhound quickly is to operate between Detroit, Flint, Saginaw and Bay City, was addressed to the Governor, Attorney-General Herbert Haddock, and State Highway Commissioner Charles M. Ziegler. The Governor's legal counsel said the move was unprecedented, and expressed uncertainty how it could be brought before the State Aeronautics body for consideration. The State Board also established a pro-

cedure in giving a surface carrier authority to enter air operations.

"Our order has been issued, and I don't see how a petition which anticipates damages before they occur can hope to countermand that order," said Thomas E. Walsh, acting director of the Board. PCA's appeal claimed the Board granted to a "bus company with no air experience" a route serviced by PCA prior to April, 1943, and since suspended because of the war.

Protest Phase — Walsh asserted that Greyhound Skyways received the Board's charter because of "tailor-made" postwar plans it had undertaken. He had considered the route "open," he added, because PCA had not redrafted plans to resume service, and therefore he had not deemed a hearing necessary.

"This is a brand new field and one that will boom after the war," Walsh said. "It will have more and more bearing upon the state itself as a commensal air service develops. One Board welcomes a chance to see where it stands with relation to federal authority."

Appeal — PCA told the Appeal Board — the Governor, Attorney-General and Highway Commissioner — it found it "most difficult to con-

prehend why it is so necessary to rush the granting of certificates to a bus company to transport passengers by air when no equipment is presently available and when development of the helicopter and other small planes suitable for local, commercial use is still in the experimental stage, with the commercial and economic applications open to considerable conjecture.

In another development on the State aviation front, Gov. Spessard Holland of Florida appointed a seven-man citizens citizen committee on aviation to study probable trends of postwar aviation in Florida. The Committee, authorized by this year's legislature, will submit recommendations to the State lawmakers when they meet again in 1945.

Hearings May Reopen On N. Y.-Boston Line

CAB notified of change in rail's holdings of Northeast stock.

Hearings on applications to fly the New York-Boston route, recently concluded after sessions in both New York and Washington, may be reopened.

Northeast Airlines has notified the Civil Aeronautics Board that the Boston and Maine and Maine Central Railroads have disposed of 100,000 of the 150,000 shares of Northeast stock that they owned when the hearings closed.

Control—The question of "control" of the airline by these railroads had played an important part in the hearings and an even more important one in the brief filed by Public Counsel Henry L. Hall and D. Franklin Reid. The brief stated that "in the absence of any issue of control the public interest would best be served by authorizing the operation of Northeast between Boston and New York."

However, as public counsel felt unconvinced that the railroads did not control the airline, they recommended that the application of Colonial Airlines for this route be granted. Other lines also have applied.

Stock Disposal—To give counsel opportunity to question Northeast and representatives of the railroads about the disposal of the stock, it seemed certain that the case would be reopened, probably after the first of the year.

S. J. Soltesman, president of Northeast, refused to disclose the purchases of the stock prior to further hearings.



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AA Cites Saving In Reclaiming Oil

Company recommends re-use of lubricants by armed forces.

American Airlines, drawing on its own experience in use of re-refined lubricating oil, recommends reclaiming of oil by the armed forces as a lubricant-saving device.

G. E. Kirchner, chief AA engineer, suggests re-refining units at or near all key air bases, and points out that crankcase oils drained from ground aircraft maintenance equipment operated by the AAF, Navy Quartermaster Corps, or Ordnance Department might readily be re-refined to new oil specifications. In testing drained crankcase oil in the field, he says, no savings in re-refinement should be made. Instead it may be reclaimed Oil drain periods also may be extended.

25 Percent Re-refined—About a fourth of the oil used by the airlines throughout its entire system is re-refined lubricating oil, Kirchner states. The line started re-refining its lubricating oil in 1948, under direction of Gilbert K. Brower, materials engineer, at Dallas, Newark, Cincinnati, St. Louis and Chicago, but because 90 percent of all oil changes are made in New York at approximately 100-hour oil change periods, all such operations are now carried on there in one unit.

American is using over 5,000 gallons of re-refined oil a month in its aircraft engines operating out of

New York, compared with 3,000 gallons between August, 1948, and May, 1949.

12,000 Barrels a Day—Estimates have been made, according to Kirchner, that demands for aircraft lubricating oils will reach 13,000 barrels a day by the end of this year. Re-refining, he believes, will meet much of the demand, since "if only 10 percent of the average amount of that fuel oil requirement were re-refined, there would be an annual saving of 13,000,000 gallons of aircraft engine oil." Re-refinement of heavy duty motor oil used by other branches of the service, he said, would send the saving into "astronomical figures."

American has made no actual flight tests to compare operating consumption of an engine on re-refined oil with one on new oil, since re-refined oils are not used this way in service. "Our flight experience," AA's chief engineer reports, "has been based on using re-refined oils as produced in New York, in the same manner as new oil would be used; for refills and makeup."

SHORTLINES

A commission to regulate air transport was among the major principles in a postwar program advanced by National Association of Manufacturers at the Second War Congress of American Industry, sponsored by NAM in New York last week.

In Chicago, Rep. Randolph (D., Va.) encouraged amendments post-

war construction of 10,000 to 20,000 new airports and \$55,000,000 worth of highway flight 6000, in addition to 50,000 to 60,000 miles of new express highways, to "take up the unemployment slack." He told the American Association of State Highway Officials that the United States can be expected to have 500,000 private airports within five years after the end of the war.

Northwest reports it carried 10,000 revenue passengers in October, its planes setting a new record of 3,024.74 revenue passenger miles, 45,000 ahead of the previous high in August.

Compania Mexicana de Avionacion, Pan American affiliate in Mexico, has added to service on its routes to this country and Cuba "the most advanced wireless air travel needs." PAA airplanes: Three daily flights have been between Mexico City and Mazatlan, and service is daily between Mexico City and Laredo, San Antonio, Houston, Dallas, and Miami. San Antonio and Miami have been increased to four times a week.

Pennsylvania-Central is planning to open a new city ticket office about Dec. 15 in the Hotel Cleveland at Cleveland. PCA claims it is carrying about a third of all air mail from Washington, and expects to handle 146,536 of the total of 457,694 pounds shipped from the capital in October.

Major La Guardia told 200 persons who gathered in celebration for fourth anniversary of La Guardia Field that the airport now has 3,000 more employees, exclusive of military operations, than it had in 1946. He estimated that the current year will see 5,500,000 more mail pounds and 3,300,000 more air express pounds leave the field than during the first year of its operation, and predicted that 100,000 more passengers will use the field this year than the 500,000 in 1949.

Lekinson Brothers have acquired an interest in Air Express International Agency, Inc., and related companies, Gustave M. Mayer, Agency president, announces. Paul R. Mathews of the banking firm has been elected a director. Air Express International Agency was organized in 1936 and has arrangements with Pan American Airways, American Export Airlines, TACA, Hutton West Indian Airways, American Brand, and KLM, Royal Dutch Airlines. Its offices are in New York, Miami and New Orleans.

Panagra has rearranged schedules over the principal section of its South American air network to increase passenger and cargo service, along the third of three DC-3A's recently allocated it to help on the traffic between its Buenos Aires and Buenos Aires terminals. Panagra says the flexibility of the new equipment will permit its use alternately for scheduled passenger-trail-and-express service and all-cargo service started 13 months ago.



Airline Operator G. E. Kirchner: American Airlines reports approximately 25 percent of the oil it uses is re-refined lubricating oil. Here Gilbert K. Brower, materials engineer and director of the program, touches a worker while an adjustment at a re-refining machine at New York.

Senators Ask Use of Canadian Airports Linked by Alaska Route

Subcommittee points to "large investment in facilities" and personnel improvements in recommending talks with Dominion.

Negotiations with Canada for frequent use of airports linked by the Alaska highway are recommended by a Senate subcommittee just returned from an inspection of the road.

"The United States," said the subcommittee, made up of members of the Senate Post Office and Post Roads Committee, "has made a large investment in facilities of these airports along the route of the highway improvements made or of permanent value for defense of Alaska and should remain available for use after the war. . . . The War Department should request the State Department to initiate negotiations with the Canadian Government looking to free use of the airports after the war."

Air Route Established—A chain of airports from Edmonton, Alberta, to Fairbanks, Alaska, was in existence when the highway was first dedicated on the air route from Edmonton to Fort St. John and Fort Nelson, British Columbia; Watson Lake and Whitehorse, Yukon Territory, and to the Alaska interior. "Early stepping stones," the report states, were small airports that lacked personnel, shops, hangars and radio facilities. There were no emergency landing facilities, no fuel, no maintenance, and no supplies for personnel depended on air transport. To prepare for planes for Northwest Pacific operations and to provide Alaska emergency should the main route become too hazardous, "growing and surfacing of a connecting highway and reconstruction of airport service facilities were required."

Air Routes Needed—The subcommittee found that the general situation now has improved, but "the necessity remains for both a highway and an air route suitable for long operations as a part of the permanent Alaska defense." It concluded, however, that the Alaska highway, as being completed, is adequate for anticipated military needs. Further construction of a proposed military highway was not considered warranted now.

Along the present new road, the group saw airports being expanded. Runways are being enlarged, hangars with shop facilities and barracks built and radio facilities being in-

stalled. Flight strips are going in at several points. In addition to serving as a guide to planes from the United States to Alaska and beyond, the highway may be used for a landing in "extreme emergency," something that already has occurred on one of its Alaska sections.

Justice Dept. Studies Plant Liquidation

Eyes purchase option for possible use as monopolistic combinations.

Justice Department is watching plan of federal agencies and Congressmen for postwar liquidation of war plants. Justice feels that purchase options held by industrial operators could be used in such a way as to create monopolistic combinations against the public interest.

Army Tests C-54

Of interest to airlines considering postwar conversions of military transports are latest figures on performance of Douglas C-54. The four-engine C-54 is qualified as an emergency plane to qualify for the Army's new "Category A" aircraft rating. A C-54 of 68,000 pounds gross loading, nearly maximum, was required to take off in 2000 feet and to use only 1800 feet of runway in landing.

Using the plane's electric hoist and two-track ramp, a crew assembled loading gear and stored for flight a bulky field gun and 8100 pounds of ammunition. With gun load, a 1300-pound bomb and 1450-gal. load, weight was specified.

No loading time was accounted for a cargo that might have been comparable to commercial air line cargo.

The Army tried the C-54 as a paratroop ship, too. At a service speed of 165 mph, fifteen and a half minutes loaded out with no prop wash effect, the hoisted engine (dive) in under four tons, three gliders of unbalanced load were towed at speeds up to 150 mph without overloading of the towplane's engine.

Fred E. Bergquist, economist in the Assistant Division, was expressing personal opinion when he recently addressed the National Industrial Conference Board on "Disposition of War Plants." The department didn't tell Bergquist to speak or did it tell him not to. It may be assumed that the address represents preliminary thinking on this subject by the Attorney General and staff.

Wagons—Bergquist said existing industry could be crowded by a windfall supply of plant disposal in industries in which existing capacity and flood charges are an important factor. On the other hand, the danger of monopoly tendencies should be carefully avoided. As of Jan. 31, 1945, the speaker said 31 corporations held about half of total contracts for public housing facilities.

However, the Justice economist dwelt briefly on the question of trusts and monopolies. He told *Aviation News* he had studied the subject when the War Relocation Administration prepared Senate Document No. 109, a report on federal agency postwar planning, and his main intention was to give helpful information. **Breakdown of Figures**—Bergquist broke down the company's \$15,500,000,000 investment in war plants, both by agencies and by industries. He points out that this total in facilities is equal to only about one-third of the estimated current value of \$47,000,000,000 a month. Therefore, plants should be disposed of with more consideration for beneficial effect on the national economy than for the salvage in itself.

He poses two broad alternatives: (1) immediate disposition regardless of price, and (2) disposition with consideration for economic benefit as well as the ultimate reserves. While he favors the latter, he does not advocate slow procedure as such. He advocates orderly liquidation as likely to achieve both objectives. Many of the country's problems will be solved by businessmen rather than by Washington.

333 Plant Plants—Of the 2,250 government-owned plants, valued at \$15,500,000,000, 333 are valued at three billion or are devoted to production of aircraft, engines, parts and accessories.

Many larger commitments, Bergquist details, including shipbuilding, aircraft, aluminum, steel, oil, oil refineries, and other enterprises, "may not be readily convertible or available for peace-time operations." He seems to believe the government may want to keep up these facilities for possible future

use, but even if not, they may not be suitable for peace production. Aviation facilities are given as the outstanding example of imbalance when war capacity is compared with normal capacity.

Five Plans Proposed—The factors of imbalance in terms of normal requirements, uneconomical location, concentration in the hands of a few companies, the difficulties of participation in plant disposal by small business, and the unavailability of question, what will the post-war production requirements be—all are dealt with in detail.

The speaker proposes five alternate plant disposal plans to fit varying conditions. They are: (1) overall selling of plants, and pamphlets giving complete details for interested persons. He would have Congress lay down a broad plant liquidation program to be followed by administrative agencies.

31 Bergquist had to put his people in one sentence he probably would say he wants war plants used to best advantage for reconstruction of the country.

Brotherhoods Oppose Rails in Air Field

Also suggest U. S. International limits stay out of domestic traffic.

Another voice was added last week to the chorus as power aviation and the railroad brotherhoods look a shared against surface transport invasion of the airways and favored a "single strong American flag line" in international operation.

The views were those of Alvah Johnson, grand chief engineer of the Brotherhood of Locomotive Engineers, and A. F. Whitney, president of the Brotherhood of Railroad Trainmen, together representing over 225,000 workers.

Wage Standards Studied—They considered that present international and domestic laws on air transportation that Congress covers possibilities of providing that between foreign flag air lines protect American wage standards. They also advocated that this country's international airlines stay out of domestic traffic and vice versa, and urged that license to foreign lines for dispatches and pickup of traffic be limited to gateway airports.

In retirement of policies already expressed, the unions proposed continued Federal regulation of domestic and international air transport, and that various carriers be kept out of operation or control of any airline.

Finally, they advocated that the United States concentrate on a single air line "to compete effectively in the postwar world against the great foreign airline monopolies," suggesting that such a line be organized subject to government approval and be privately owned, perhaps with all American transportation interests represented.

Ask U. S. Leadership—The much heads expressed the opinion that it was the time for the government to "assume a leading part in the shaping of America's future international and domestic transport policy." Through a thorough public discussion of the problem, they said its solution should not be left entirely to diplomatic negotiations, and "the people of the United States should move more rapidly to establish a comprehensive policy."

The theme throughout was that air transport policy was "inextricably enmeshed" with issues of safety, war and peace. Until peace is assured, it was said, the American people should not in any way "inquire their present advantages in commercial aviation and military air power."

Freighting Policy—Unsettled international flights and peace outcasts, it was said, call for a "freezing" of present air policy and the statement opposed any relaxation of control of air space, declaring that for the present we must consider ourselves "in a state of war."

A necessary principle of national safety.

The provision suggesting that Congress study to protect American wage standards was supported by the confederates that "high wage standards are essential in a highly skilled industry like air transportation," and should be protected against cheap foreign labor.

Post Airline Airline sources suggested that the recommendation of a single American line for foreign operation might have been inspired by Pan American Airlines, which has favored the "closed instrument" line. Unofficial Pan American sources said the statement came as a surprise, however, and those responsible for it took their only contact with airlines concerned by the arrangement was to conduct various viewings at the problem.

Interest of the brotherhoods was aroused when rumors started that the railroads would enter the air transport field.

BRIEFING

Charles E. Wilson, WPA executive Vice-Chairman, told the National Association of Manufacturers meeting in New York that aircraft engine production in 1943 was about 540 percent higher than 1942 and that our current rate is more than 25 percent higher, and for 1944 the industry is expected to run this to a figure 333 percent higher than for 1942. He said that, as for numbers of planes, "we are now approaching our top level."

Arthur Hayes Sulzberger, publisher of *New York Times*, has urged the automobile industry to begin planning for aviation expansion because "we are meeting with lightning rapidity toward becoming one of three automotive." Explaining that he was not overlooking the necessity of winning the war, he added that free enterprise was the basis of our way of life and it is our task to find out how to make it work. "Just as it is necessary for the car maker to plan far into the future of peace, so it is essential to plan for peace in time of war," he said.

The will of Max Leven D. Berringer, elder champion, who died in a California plane crash, provided for an annual monetary trophy to be awarded to the individual making the longest official distance during flight from any type of launching other than towing.

Del Amersch at Buffalo has put 420 boys of 16 and 17 into 225 242-hour jobs under an arrangement whereby they work in the plant three evenings a week. They are paired, with one working the first three evenings and the other the last three, under a strict rotation system between the company and the high school by which the young worker agrees that his academic studies will not go down.

Concrete and wood examples and problems as to how the Navy Department and industry has saved thousands of pounds of critical materials, a large total of man and machine, war of labor and millions of dollars are offered by a Navy exhibit current in the Social Security Building in Washington.



Feeder Action by CAB

THE CIVIL AERONAUTICS BOARD has finally overcome its own inertia by acting on the vital problem of airline route expansion.

In granting Esair, Inc., a three-year certificate for an experimental Amarillo-Houston feeder service it has bestowed the first domestic certificate of convenience and necessity—although on a temporary basis—since the "grandfather" period when the existing air carriers were all certificated by the old Civil Aeronautics Authority. CAB's predecessor.

The decision not only brings a new company into the domestic picture for the first time in many months, but it breaks the log jam of applications which have piled up. Psychologically, the move clears the way for further action. Although no one anticipates that the Board will suddenly go hop-wild on route expansion, nevertheless, chances now appear better for moderate extensions in routes or addition of intermediate points, than at any time in recent years.

Nor should the opinion be taken as an indication that rapid action will follow on the hundreds of other feeder applications. Realistic observers believe that many of these will be weeded out in one way or another before hearings start.

It is unfortunate and even misleading that the majority opinion was agreed only by vice-chairman Warner and member Lee. Chairman Pogue and member Ryan presented a separate concurring opinion with a dissent, while member Branch also added a similar opinion.

Actually, however, the Board members were unanimous in the feeling that Esair and Continental, which was granted a similar three-year certificate for Hobbs-San Antonio, should get expansion approval. The dissents were on minor points only, although perhaps significant in that both urged even more new service than the majority opinion. Pogue and Ryan held that a temporary certificate also should have been given Braniff for through operations between San Antonio and El Paso. Branch contended that American should have been permitted to serve San Antonio on its already operating El Paso-Monterrey link.

Especially to the air transport industry are the Board's words that "this is an opportune time to experiment in this important Texas area with three-year authorization because the airlines involved, enjoying as they do better financial results than they have ever experienced in the past, can better afford to undertake new development of this kind than ever before. There is no serious risk that the government will be committed to any substantial financial outlay and there is a certainty, at the end of three years, that the experiment can be terminated if the indications at that time are adverse to its continuance."

If the "important Texas area" is a suitable experimental area for new type operations, the question naturally is being asked by the industry today—What about other important areas which need air service, especially elsewhere in the sparsely West?

"The rendering of local air transportation service, such as Esair has proposed, presents a difficult economic problem to which a great deal of study is being devoted, and the CAB's predecessor should be supplemented by the accumulation of actual experience with new types of operation of particular interest or of potential importance," the opinion says.

"The service which will be rendered by local carriers concentrating upon the problems of a limited region in which the terrain and climate are generally favorable to such operations, and emphasizing service to intermediate points rather than competition for through traffic, seems to be sufficiently distinctive in character and of sufficient interest in relation to the general planning of future development to justify its establishment in the West. Texas area on an experimental basis. The results during the designated life of the experiment can determine whether the experimental service should thereafter be converted into a permanent one, and the carrier's ability to make substantial progress toward self-support will be an important factor in determining its future as a certificated operator of services of the type proposed."

Thus, new spirit toward careful experimentation, where the government is unlikely to be obligated for excessive costs, is long overdue. The Board for many long months has given every indication that it had been unable to agree on any route or rate policies for the future, and was apparently in permitting necessary growth. Contradictions in opinions, apparent indecision on major problems, with Board members themselves frequently at odds throughout discussions of cases, these a pall of uncertainty and doubt over what should have been a rapidly expanding airline system since pre-war days.

The Esair opinion gives little evidence of formulation of long-term policies, but it is to be hoped that it at least marks the beginning of the end of a long period of stagnation, and the start of a bolder era in which private industry will get a chance to show whether it can sink or swim, fancy free.

Although the opinion repeats the cautious warning that starting of the services approved depends on national defense conditions, it is felt in Washington that operations can be started as soon as the carriers are ready. Equipment is admittedly a problem, but is not likely to be insurmountable.

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